

# small air forces observer

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# small air forces observer

the newsletter of the Small Air Forces Clearing House

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**SAFO EDITORIAL POLICY:** The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching the history of aviation on all aspects of aviation, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO.

**SUBSCRIPTION RATE:** Subscription to the current volume of the SAFO is US \$7.00 for 4 issues per year via surface mail. For air mail delivery, add \$6.50 for Europe and Latin America or \$8.25 for for Asia, African, and Australia. New subscriptions begin with all issues of the volume current at the time payment is received; if you desire otherwise, please specify with your payment which issues are desired. Send remittance to Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923 USA. You can also have your bank transfer money directly to the SAFCH bank account: Routing # 3220-7021-3; Coast Saving and Loan, 137 Carmel Valley, 27845 Berwick Dr., Carmel, CA 93923; Credit to James V. Sanders, Account number 03105350.

**BACK ISSUES:** Either Back issues or Xerox copies of out-of-print issues are available for all issues of the SAFO published. For a list of back issues and their costs, see the "SAFCH Sales Service" sheet in this issue. For a list of all issues and their content, send two 1st class stamps (or 2 IRCs) to the editorial office.

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**INSTRUCTIONS TO AUTHORS:** Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer and Microsoft Word should consider sending the manuscript on disc. Photo should be black and white prints although color

prints can be used. All art work must be ready for printing. It is best to plan for the art to be reduced to 75% in printing and the finished drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as you want them to look.

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**COVER COMMENTS:** A two-seat SE-5a, A2-36, was one of the unique modifications carried out by the Royal Australian Air Force. This aircraft is shown at Point Cook sometime in 1926. Flight Lieutenant George A. Well (ex 32 & 92 Sqn.) occupies the front seat. The story of the SE-5a in RAAF service begins on page 97.

**CAPTIONS FOR PHOTOS ON PAGE 99:** Upper left - RAAF SE-5a A2-33 (via J. M. Bruce). Upper right - RAAF SE-5a A2-24 with unidentified officers. Lower left - Lineup of RAAF SE-5a's at Point Cook in 1927. Lower right - RAAF SE-5a A2-36 (via J. M. Bruce). All photos are from the Historical Aircraft Archives, PO Box 73, Boorowa, NSW 2586, AUSTRALIA.

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## ARGENTINA

LATIN AMERICAN WINGS (Monsenor Alberti 1575, 1643 Beccar, Republican Argentina; 4 issues US \$7.00 to Latin America, \$10.00 surface to all other countries)

Nothing received since 1/2 86

## AUSTRALIA

AUSTRALIAN PLASTIC MODELLER'S ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$ 18.00).

1/86 (28 pages) "Kangazelle" 1/2 page with side-view drawing of British Army Air Corps Gazelle with RAAF roundel. "Iroquois Colouring" 3 pages including one photo and 4-view drawings of RNZAF UH-1. "Lincolversion" 7 pages including one photo, 4 side-view drawings (RAAF & Argentine), 1/72-scale 3-view drawing, and text for converting a Lancaster into a Lincoln. "Skyservant" side-view drawing of West German Skyservant. "From Twotter to Otter" 9 pages including one photo, 1/72 3-view drawing, 9 side-view drawings (Ghana, Canada, RAAF, & UN), and text & sketches for converting the Twin Otter into a Single Otter.

2/86 (28 pages) "JGSDF UH-1H" 1/2 page with side-view drawing of camouflaged Huey. "Spanish Republican Flat Nosed Ones" 2 pages including one 3-view drawing and 3 side-view drawings of Spanish I-15. "Miracles in Grey Pt. 4: The Last of the Experimentals" 5 pages including three 4-view drawings of grey Mirages. "Lo-Vis Gooney" one page of drawings of RAAF C-47 in grey. "Mosquito Variants" 7 pages including table listing kits parts to use for 32 variants, 9 photos, and 3 side-view drawings. "The Final Beau" one page with drawing of RAAF target towing Beaufighter.

## AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Kannwegasse 1/15, A-1150, Wien).

2/3-86 (51 pages) "Fiat G 46 I-B" 6 pages including 2 photos, service history, and 3 pages of 1/72-scale drawings. "Angriff auf die Munitionsfabrik in Brescia" 7 pages including 2 pages of 1/72-scale drawings of Lohner B VII. "Obli. Walter Vogler" 6 pages including 4 pages of 1/72-scale drawings of Caproni Ca 133. "Sablatnig P III" 5 pages including one photo and 2 pages of 1/72-scale drawings. "2.HS Staffel - HS-Gschw. 1" 5 pages including one photo and 2 pages of 1/72-scale drawings of Austrian Bell 206A. Color photo of Austrian Bell 47G-2.

PANORAMA (IPMS Austria, Nordmannngasse 11-13/4/6, A-1210, Wien).

Nothing received since 1/86

## BELGIUM

KIT (IPMS Belgium, Te Couwelaarlei 103 bus 21, B-1200 Deurne; 4 issues for US\$ 8.00, add \$2.00 for airmail, no personal checks accepted).

Nothing received since #61

## BRAZIL

EM ESCALA (IPMS Brazil, Rua Arquias Cordeiro, 316 S/502, CEP 20770, Meier, RJ).

3/86 (23 pages) "Brazilian Meteor MK VIII" 6 pages including 4 pages of drawings of details and one page with 3 side-view drawings. "O Grande Ausente" 1/50-scale plans of Santos Dumont's 14bis.

## CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US\$ 12.00 in US \$13.00 elsewhere).

17/6 (24 pages) "Some New Czech Vacuum Formed Kits" 3 pages including 1/72-scale 3-view drawing and 3 profile drawings of Shavrov Sh-2. "Book Mark No. 1: Harvards in RCAF/RCN Service" one page of references and one photo.

18/1 (24 pages) "The DC-3 -50 Years of Aviation Fame" 5 pages including 10 photos. "DC-3 Feats - Fact or Fancy" 2 pages including one photo. "Aussie Low-Vis Dak" one page with two photos. Canadian Coast Guard DC-3" 6 pages including 12 photos and 2 pages of drawings. "Turboprop DC-3's" 2 pages with 4 photos.

## CZECHOSLOVAKIA

LETECTVI + KOSMONAUTIKA (Best obtained by exchange with a friend in Czechoslovakia).

Nothing received since 7/86

## DENMARK

NYT (IPMS Denmark, c/o Kai Willadsen, Kastellet 54/322 Kobenhavn O (01) 12 94 51; 4 issues for 70 Dkr surface, 80 Dkr airmail).

#32 (30 pages) "Danish RF-84F Thunderflash" 5 pages including 2 photos and 4 pages of scale drawings.

#33 (30 pages) Photo: Danish Wal.

## ENGLAND

MAGAZINE (IPMS England, Flat 4, 18 Delancey St., London NW1 7NH; 6 issues for US\$ 20.00 + \$1.00 joining fee).

3/86 (24 pages) "The Hunter FMk6 in Belgian Service" 4 pages including one 4-view drawing of Red Devil's aircraft and 5 side-view drawings. "25 Jahre JG 71 'Richthofen'" one page of drawings of F-4F in special paint scheme. "The Martin Baker Mk F100A Ejection Seat for Mirage 2000" one page of drawings.

PLASTIC KIT CONSTRUCTOR (PKC, 22 Slayleigh Ave., Sheffield S10 3RB, South Yorkshire; USA: J.J. Daileida, 4314 West 238th St., Torrance, CA 90505; 4 issues \$18.00).

Spring/Summer 86 (44 pages) "Westland Welkin" 9 pages including 6 photos and 2 reviews of the Hallam-Vac kit. "Swing Wing Lightning" 5 pages including 1/72-scale drawings. "Rigging the Flying Boats" 4 pages of hints on constructing and rigging large biplane flying boats. Reviews of Aeroclub's new 1/72 vacuform Comper Swift and Klemm L25. 1/72-scale drawings of Pilatus PC-9.

WIND-SOCK (10 Long View, Chiltern Park Estate, Berkhamsted, Herts., HP4 1BY; USA: J.J. Daileida, 4314 West 238th St., Torrance, CA 90505; 4 issues \$16.00)

3/85 (28 pages) "Guynemer's Nieuport" 2 pages including one photo and 1/72-scale drawings. "Rumpler CIV: Part 1" 2 pages including 2 photos, scale drawing, and 2 color chips. "Rumpler CIV" 9-page reproduction of technical report on captured CIV (with many sketches of construction details).

4/85 (24 pages) "Rumpler CIV" 2-page conversion article including 2 color chips. "Build a 1/72nd Hangar" 3 pages with scale drawings. "DH4 Colour Schemes" 3 pages with 6 side-view drawings and conversion information. "Red Star Anatra" 2-page history and kit review.

1/86 (28 pages) "Revell's Bullet" 4 pages on modeling the Morane Saulnier Type N with 8 photos and 2 side-view drawings. "Roland CII" 5 pages including 8 photos, 4 side-view drawings, and 2 color chips. "Building Bell Tents" one page with 1/72-scale drawing.

2/85 (28 pages) "Building Metal Kits" 5 pages with 12 photos of the Hansa-Brandenburg DI "Star-strutter" with 9 photos of the C. Atkins' kit under construction. "Ponnier L1" 3 pages including 2 photos and 2-view drawing. "Fokker DVI" 8 pages including 7 photos, 3 side-view drawings, 2 color chips, and 9 photos of modeling the DVI from the DVII and DrI.

#### FINLAND

MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 4 issues \$6.50, add \$1.00 for airmail and \$1.50 for cashing personal check).

#54 2/85 (8 pages) "L-13 Blanik" 7 pages including 9 photos (5 of interior detail), 2 side-view drawings and top & bottom plan-view drawings of Finnair 'OH-501', and side-view drawings Blaniks in Soviet, RAF, & USA markings.

#55 3/85 (8 pages) "Ghost Morane" 4 pages including 5 photos, scale 3-view (port, starboard, & top) drawings and 2 side-view drawings of Finnish MS 406 Morko Morane. Photos: Saaski II 'K=SASB', 'SA-122', & 'SA-127', VL Paarma 'PA-137', Gloster Gamecock 'GA-45', VL Kotka 'KA-148', and VL Tuisku 'TU-149'.

#### FRANCE

LA VITRINE DU MAQUETTISTE (IPMS France, 3 rue de l'Amiral Roussin, 75015 Paris; 4 issues 60 FF surface, 80 FF air, back issues 12 FF, "La Lettre de l'IPMS" 25 FF).

Nothing received since #26

#### GERMANY

MITTEILUNGEN (IPMS Germany, Oertzenweg 12b, 1000 Berlin 37; 12 issues DM 42.00 Europe, DM 49.00 USA, DM 55.00 Japan, DM 61.00 Australia).

5/86 (30 pages) "Curtiss P-40M of Witold Ubanowicz" 3 pages including side-view drawing.

6/86 (30 pages) "Gladych's P-47s" 5 pages with 3 pages of the P-47's flown by the third-ranking Polish ace.

#### ITALY

IL NOTIZIARIO (IPMS Italy, CP 182, 41100 Modena Ferrovia; 4 issues 24,000 Italian Lira in Europe or \$18.00 overseas).

2/86 (32 pages) "I Colori della 'Elivie'" 5 pages including 8 photos and 3 side-view drawings of civil AB-47J, AB-204, & AB-206. "Due Italiani Inediti" one page of side-view drawings of MC.202 and CR.42.

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

6/86 (82 pages) Photos: Spanish AB.411 (color); Singapore T-33 '362' (color); and Nigerian C-130H 'NAF 911' (color). "EAP, Rafale, Lavi, JAS 39" 15 pages including 14 photos, 2 cur-a-way drawings, and four 3-view drawings. "FIDA 1986" 3 pages with 5 color photos (Halcon, Bo.105, Mirage 50C, Pillan, & Pitts S-2A of Chilean Air Force) and 3 b/w photos (Pampa & Tucano). "Falchi Argentini alle Malvinas" 6 pages including 8 photos (5 in color), 3 squadron badges in color, and a table listing Argentine A-4 losses (with date, hour, pilot, aircraft codes, and cause). "Etendard/Super Etendard" 2 pages with 5 color

side-view drawings (French & Argentine).

7/8 86 (84 pages) "Da Pinguini ad Aquile" 3 pages including 5 color photos of Swiss PC-7 and Vampire T.55. "B-57" kit review with 6 color side-view drawings (one Pakistani).

AEROFAN (Gioglio Apostolo, via Ampere 49, 20131 Milano; 4 issues for US\$ 16.00).

1/86 (36 pages) "Canadian Airmen in Italy" 7 pages including 5 photos, and 7 maps. "The S-55 and its Versions" 12 pages including 1/72-scale 3-view drawings and many sketches and photos of details. "In Combattimento con l'MC-202" 3 pages including 5 photos. Photos: Nardi FN 305 in German markings, Fiat CR-20, Rumanian SM-83 'YR-SAC', Ansaldo SVA-9 'I-BACE', Breda-Pensuti Triplane 'I-BADZ', & Macchi M-14 'I-BADG'.

2/86 (36 pages) "CRDA CANT Z 1015" 9 pages including 9 photos and 3-view drawing. "The Italian DB 601A" 3 pages including 2 photos and 2 drawings. "The S 55 and its Versions" 17 pages including 29 photos, 5 pages of drawings, 2 pages of data and characteristics, and list of serial numbers of military and civilian aircraft (including 5 for the USSR). Photos: Macchi M 7 'I-BAFV' & M 17 'I-BAHG', Saiman 204R 'I-BAGA', MB 326G 'I-BAGJ', Bf 108B 'I-GIPI', and Fiat G 59A.

#### MALTA

MODELAID INTERNATIONAL (MAI, 206 Old Bakery St., Valletta; 7 issues \$27.50 airmail).

#14 (32 pages) "Modelair Colour Guide" color chips for 'Dark Earth' and 'Sky'. "Japanese Air Forces 1935-1945" 2 pages including 2 photos on early Navy color schemes. "The Iron Dog: Bell P-39D" 7 pages including 6 photos, 7 tone side-view drawings (RAAF, Free-French, & Italian), 3 color side-view drawings (Italian and Portuguese), and one page of scale drawings. "McDonnell's Banjo: F2H Banshee" 5 pages including 3 photos, 4 side-view drawings (RCAF), and 3 colour side-view drawings. "F-16" 8 pages including 11 photos, 4 side-view drawings (Belgian), one color side-view drawing, and 2 pages of scale drawings. "Air War in the Med: Mast High - Blenheims in Action from Malta (June 1941 - March 1042)" 2 pages with 2 photos.

#15 (32 pages) "Modelaid Colour Guide" color chips for 'Light Grey' and 'Sea Blue'. "Air War in Korea" 2 pages including 8 side-view drawings of US Navy aircraft. "McDonnell's Step Forward: F3H Demon" 6 pages including 7 photos, 3 side-view drawings, 2 color side-view drawings, one page of scale drawings. "The Brewster Buffalo" 4 pages including one photo (RAAF), 4 side-view drawings (Finnish, NEIAF, & Japanese), 3 color side-view drawings (Finnish & Japanese), and one page of scale drawings. "Japanese Air Forces 1935-1945" 2 pages including 4 side-view drawings of Claudes and Zeros showing evolution of color schemes of Navy aircraft from 'Pale Grey' to early camouflage schemes. "Buccaneer" 9 pages including 15 photos, 6 side-view drawings (SAAF), one color side-view drawing, and 2 pages of scale drawings.

#16 (32 pages) "Modelair Colour Guide" color chips for Olive and Basalt Grey. "Japanese Air Forces 1935-1945" one page on Naval Air Force color schemes with side-view drawing of Claude. "Air War in Korea" 2 pages with side-view drawings of RAN Spitfire FR.47, Firefly AS.5, and Sea Fury FB.11. "Lysander: Westland's STOL" 6 pages with 5 photos, 4 side-view drawings (Free France, Egypt, Portugal, &

Turkey), 3 color side-view drawings (Free France, Turkey, & RAF), and one page of 1/72-scale drawings. "Panavia MRCA Tornado" 10 pages including 13 photos, 4 side-view drawings (RAF, West German Navy, & Italy), color 3-view (side, top, & bottom) of Saudi Arabian aircraft, and 2 pages of 1/72-scale drawings. "The Supermarine Scimitar" 3 pages including 3 photos and 4 side-view drawings.

POLAND

TECHNIKA LOTNICZA I ASTRONAUTYCZNA  
Nothing received since 11-12/86

SOUTH AFRICA

AFRICAN AIR REVIEW (Aviation Society of Africa, PO Box 1413, Alberton 1450; 4 issues US\$ 8.00).

6/86 (8 pages) "African News" 2 pages including news on military aviation in Angola & Lesotho.

AIR AFRICANA (Published by ASA: see address above)

2/86 (16 pages) "21st Anniversary" one page on the Buccaneer. "SAAF Squadrons: No. 24" one page history with drawing of squadron badge and photo of Buccaneer. "Aircraft of the SAAF Museum" one page with photo of Storch. "DAK Pioneers" one page on the first SAAF Dakota's flight from Asmara to Rand Airport in June 1943. "Coronation Aviation" 5 page report on aviation activities at the coronation of King Mswati the Third of Swaziland on 26 April 1986 including 7 photos (Falcon 50 'ZS-CAO', Mercurius (HS 125) 'ZS-LPF', Nigerian Tu-134A 'C9-CAA', Nigerian HS 125 '5N-AXO', close up of the seal of the Nigerian Head of State carried on '5N-AXO', Queen's Flight Andover 'XS789', & Presidential Flight Boeing C-135B '61-2429'. "Dakotas in Southern Africa" 4 pages with 4 photos (one of SAAF Dakota '6853'). "Aircraft Modeling" two pages containing side-view drawings of 3 SAAF Spitfires.

SWITZERLAND

VIRUS PLASTICUS (IPMS Switzerland, c/o Mathias Weichelt, Zelgstrass 27, 3027 Bern; 4 issues for Sfr 24).

Nothing received since 2/86

"Members of the SAFCH visiting the Netherlands undoubtedly know about the Airborne Museum in Arnhem. Few, however, may be aware of an equally interesting museum on the other side of Arnhem, the Museum of the Netherlands East Indies Army. Located in a grand estate which serves also as an old soldiers home for veterans of the NEI forces, the museum contains a very good collection of both ethnographic and military material. Among the collection is a large display of wooden scale models of all aircraft which were used in the NEI. All are painted and coded in appropriate insignia, etc. Models on display include: (with year of entering service) Glenn Martin Type TT (1916), Avro 504K (1919), DH-9 (1919), Vickers Viking Mk IV (1922), Koolhoven FK-51 (1936), Fokker D VII (1922), Curtiss P-6E Hawk (1930), Fokker DC-1 (1925), Fokker C X (1935), Fokker C VE (1929), Martin Type 139 WH-3 (1937), Brewster Buffalo 339/439 (1941), Curtiss CW-22 Falcon (1940), Curtiss CW-21 (1940), Curtiss 75 A-7 (1940), Lockheed Lodestar (1941), Lockheed P-

USA

WWI AERO (Leonard Opdycke, 15 Crescent Rd., Poughkeepsie, NY 12601; 5 issues \$ 20.00; tax deductible).

9/86 (98 pages) "burgess, Herring-Burgess" 13 pages including 18 photos, and 3-view drawings of Herring-Burgess biplane & Pfitzner monoplane. "Nieuport 28" 10 pages with 3 photos of aircraft at USAF Museum and 6 photos of Swiss aircraft sans covering. "Ponnier L1" 2 pages with 5 photos (2 of aircraft in Belgian markings). "Fokker E.III" 4 pages of scale drawings. "Bleriot Model III" one page of scale drawing of elliptical-winged aircraft. "Curtiss Model H America" 4 pages of 27 photos.

DIRTY PLASTIC (IPMS Phoenix, 509 W. Camino Dr., Phoenix, AZ 85021; 4 issues for \$6.00 USA or \$9.00 elsewhere).

Fall '86 (20 pages) "New Standard NT-2" 3 pages on scratch building a USCG NT-2" (Editor's note: There are few air forces smaller than the US Coast Guard's!) "Modeling the Mitsubishi A5M Claude in 1/72" 7 pages including 12 side-view drawings and information for modeling all the variants. (Editor's note: Definitely not a small air force, but lots of fun anyway.)

IPMS HAWAII (1650 Lehia St., Honolulu, HI 96818; \$5.00 for mainlanders and \$6.00 for those overseas).

Nothing received since #21

PRI-FLY (IPMS Washington DC, c/o Carol Fleckenstein, 1810 Michael Faraday Dr., Suite 101, Reston, VA 22090; 4 issues \$6.00 for US, \$7.00 all others).

9/86 (16 pages) "Getting Out in a Hurry" drawings of the ejection seat for the FMA IA-58 Pucara. "The Open Cockpit" drawings of the AEG GIV.

WEAPONS AND WARFARE MONTHLY (218 Beech St., Bennington, VT 05201; 12 issues \$20.00 US, \$25.00 foreign.)

Nothing received since 3/86

40N (1943), NA P-51 Mustang (n.d.), Piper L-4J Cub (1946), NA B-25 (1942), and the C-47 Dakota (1944).

"This model collection is interesting, not because of the quality of the models which are fairly simple wooden 'ID' type models, but rather because some care seems to have been taken in accurate color schemes, insignia, and individual aircraft markings.

"Visitors to Arnhem should also consider the "Open Air Museum" which is the Netherlands version of our "Colonial Williamsburg". Dozens of farms from throughout the Netherlands, from 1600 to 1940, have been moved to the museum and rebuilt into working farms, providing a very good overview of the evolution of life and culture in the Netherlands. Several good hobby shops in Arnhem make the total experience a very worthwhile trip when visiting the Netherlands."

George Stein (SAFCH #83), Western College, Miami University, Oxford, OH 45056

"Regarding the review of the Mikro Il-2 that appeared in the July 1986 issue, I would not agree with the comments about supposed problem with the wing. Most of the English language material on this subject is a bit muddled. The Polish writing on the issue (such as Andrzej Morgala's *Polskie Samoloty Wojskowe 1939-45*), and newer Soviet accounts are very different. The Soviets recently published a collection of essays on the designs of the Ilyushin design bureau, edited by G.V. Novozhilova, *Iz istorii sovetskoi aviatsii-Samolet'i OKB imeni S.V. Il'yushina*, (Mashinostroenie, Moscow, 1985). According to the Polish and Soviet accounts, the new wing with the greater sweep was not introduced until the modernized Il-2 (with metal fuselage and other features) was introduced. Yu.A. Yegorov's essay in the Soviet book indicates that the first production versions of this variant were not built until the end of 1943. Therefore, the twin-seat Il-2's manufactured from march 1942, at least through the final months of 1943, had the initial 5 degree wing. To the best of my knowledge, the Soviets never distinguished between these two versions of the twin-seat Il-2 with any official designation. In the aviation regiments, the earlier version with the straight wing was called the doska, and the latter type was called strelkoi or strelka. Doska means 'plank' and may refer to the straight wing or the wooden construction. Strelka is the diminutive form of the work 'arrow'. Most recent Soviet sources do not refer to the twin-seat Il-2's as the Il-2m3, but often refer to them by year of production, such as Il-2 (1943). Il-2m3 may have been a factory designator, not an official Soviet VVS designation. To make a long story short, the Polish kit does accurately depict the most common version of the twin-seat Il-2 straight from the box, though some heavy wing work will be needed to build the later production type. Incidentally, the Soviet hobby magazine *Modelist Konstruktor* had a super set of plans of both single seat Il-2 and the twin seat Il-2 Strelka in one of last year's issues. (Editor's comments: Now the question is what type of Il-2 did the Polish regiments receive when they were formed in August 1944? Were they old worn-out doskas or factory-fresh strelkas?)

"On another Russian subject: I may be the source of the problem regarding Jim Maas' drawing of the Volunteer Army Nieuport with the triangle insignia. Since I provided the photo to Jim on which the drawing was based, as well as some erroneous information, perhaps I can clear the matter up a little bit with some further information on air units in the Ukraine in the 1918-20 period. In 1918, the German Army occupied the Ukraine and suppressed the nationalist Ukrainian forces of the Central Rada. They set up a puppet government under Hetman Skoropadskiy. The Army of the Hetmanate adopted Cossack tradition rather than Ukrainian tradition in uniforms and markings. A Don Cossack Air Squadron was organized with about a half-dozen ex-Tsarist Voisins. These were marked with a white circle and colored triangle on the tail. When the Germans withdrew from the Ukraine following the armistice, the Army of the Hetmanate collapsed. Two separate nationalist Ukrainian armies were formed, the Ukrainian Galician Army (UHA) in the western Ukraine, and the Army of the UNR, in the eastern Ukraine. The Army of the UNR had very few pilots, and so turned over most of its

aircraft to the UHA, who formed the Aviation Regiment of the UHA. These aircraft often retained Tsarist markings, but when refinished, used Ukrainian insignia such as a horizontally divided tail in blue and yellow (the Ukrainian national colors). these air units fought mainly against the Poles around Lwow and were eventually wiped out.

"The Army of the UNR under Petlura fought in the eastern Ukraine against the Bolsheviks and against the Army of South Russia under General Deniken. The Deniken forces actually consisted of three elements, the Volunteer Army, mainly made up of Russian officers and cadets, the Army of the Don with Don Cossack troops and some Russian officers, and the Volunteer Caucasian Army, made up from other eastern Cossack groups, with Russian leadership. Nominally, each of these armies had their own air forces, but in fact, most came under fairly centralized control. The Air Units of the Volunteer Army retained the Tsarist cocard. The Air Units of the Army of the Don adopted the white circle and colored triangle that had been used by the earlier Don Cossack Air Squadron of the Army of the Hetmanate. Jim Maas' illustration of the Nieuport shows a machine of this unit. I have never seen photos of a Volunteer Caucasian Army air unit, and there may not have been one. I am still not certain of the color of the triangle, although it undoubtedly tied up with Cossack heraldry. There were two other Russian air forces at the time, one with Kolchak's forces in Siberia, and another with Yudenich's forces along the Baltic coast. But this is another story!

"Interestingly enough, in 1920, when Petlura's forces became allied with the Polish Army, the Poles decided to form a new Ukrainian Air Force. In the autumn of 1920, they began turning over a handful of aircraft including some Albatross fighters. these were marked with a blue circle with yellow center. these units were very shortlived, and were crushed by the Bolsheviks in November 1920, weeks after they were formed.

"One of these days I plan to write up something on the Ukrainian Air Force, but at the moment, I'm still missing a lot of details."

Steven Zaloga, 69 William Street, Greenwich, CT 06830

"In reference to the profile of the T-28 of the Congolese Air Force shown in SAFO #26 and to the letters from Mr. Engler in SAFO #27 and Sr. Garcia Llaca in SAFO #31. I would like to mention two publication in which a lot of information on the Congolese Air Force can be found.

"The Belgium enthusiast magazine 'La Lorgnette' published a special number in December 1985 dealing with the Congo Civil War (also called the Revolt of the Simba) 1965-65. This 260-pages issue has a great amount of historical and modelling information with numerous maps and scale drawings. The use of the following aircraft is described: T-28C Trojan, C-47B (civil and military), B-26K Counter Invader, C-46F Commando, T-6G Harvard, and USAF C-130E Hercules. Text is in French and there are no photos. (Other subjects in this issue include the various campaigns, armored cars and other vehicles, uniforms, and

(Continued on page 112)



# THE SE5A AND THE ROYAL AUSTRALIAN AIR FORCE

On 10 May 1927, Pilot Sgt. Orm Denny was trying to outfly a heavy storm in his S.E.5a fighter serialed A2-11. Denny was on a flight from Cootamundra to Point Cook with official photographs of the opening of Canberra, the Australian Federal Capital, when he encountered the storm and elected to fly around it. This took him over the rugged terrain around Mount Buffalo when his oil pressure began to drop. There was no clearing where he could make a forced landing and when his engine seized a short time later, Denny had no choice but to try and land.

Unbuckling his seat belt - against all his training - he looked for the heaviest foliated trees and allowed the wings to hit first to absorb the impact. Some 30 minutes later he awoke on the ground surrounded by bits and pieces of aircraft. The fuselage was intact from the motor to behind the cockpit, but he wings and tail were spread through the trees. The storm which had caused this predicament now struck and Denny was forced to spend the night in a hollow log.

The next morning, he started to walk out of the bush. He soon abandoned his heavy flight suit, with the photographs wrapped inside, in a hollow log. Fortunately, he came on a trail and was able to reach a dwelling. The next day, his host lent him a horse to ride to the nearest telephone to let RAAF Headquarters in Canberra know what had happened to him.

When he recovered, he was detailed to lead a salvage team to the crash site, but after two days of searching the recovery effort had to be abandoned. Some time later, one of the bushmen who had taken part in the initial attempt to recover the aircraft sent a message to the effect that he had found the aircraft and he had a very pistol to prove his statement. Denny returned again with a salvage team and removed the engine and other salvagable gear. He now realized how fortunate he had been in stumbling on a trail in this inhospitable country. The remains of A2-11 were to be left undisturbed for some 35 more years.

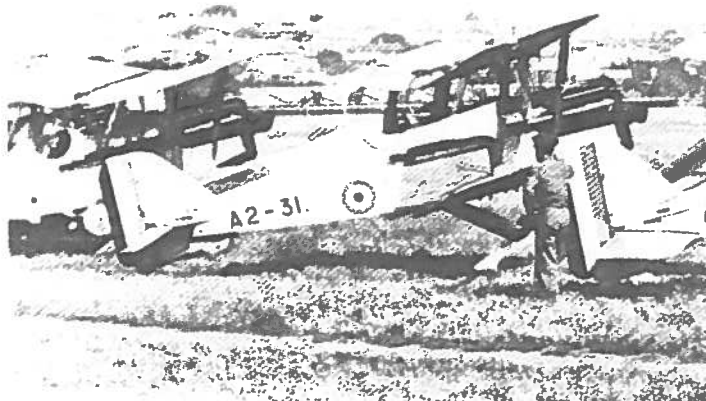
In 1918, the Australian Government had apparently decided to form a separate air force on the lines of the British RAF. Discussions on the composition and equipment of the proposed air force were still continuing in 1919 when the British Government offered 100 aircraft to each of the Dominions desiring to form an air force.

Richard Williams (later Air-Marshall Sir R. Williams KBE, CB, DSO; the "father" of the RAAF) who was one of the first Australian Flying Corps pilots and had commanded No. 1 Squadron, AFC, in Palestine, was in London at this time and he recommended the adoption of the Bristol Fighter with the Rolls-Royce engine. Williams considered that this was the best British aircraft produced up to that time and the best for Australia's particular needs which called for a general purpose aircraft. The Bristol Fighter had been used by No. 1 Squadron, AFC, in Palestine where they had been put to good use in the fighter, reconnaissance, and bomber roles. Williams' choice was endorsed by the RAF, but they stated that they did not have enough of the type for their own needs and so Australia was to receive a mixture of types.

Eventually, 128 aircraft were given to Australia, the additional 28 to replace the 44 "gift" aircraft purchased by Australian organizations during the Great War for the RFC/RAF. The aircraft received by Australia were: 35 S.E.5a fighters, 28 De Havilland D.H.9 bombers, 30 De Havilland D.H.9a bombers, 35 Avro 504K trainers, together with 12 Sopwith Pups and 12 Fairey IIID floatplanes purchased by the Australian Government. These aircraft arrived in Australia in 1920, but because of financial stringency only a few were uncrated; the others were stored in wheat sheds at Spotswood, near Melbourne.

1927 saw the opening of Canberra and almost all available RAAF aircraft gathered at Duntroon for the great event. Five S.E.5a fighters came from Point Cook, but one ground looped at Cootamundra. Three others suffered crashes which put them out of action. Other S.E.5a fighters from Richmond arrived to make up the numbers for the flypast. The last Point Cook S.E.5a was assigned to Orm Denny to fly the official opening photographs back to Victoria. As related at the start of this article, there seemed to be little luck for the Point Cook S.E.5a fighters on this occasion.

The RAAF carried out a number of experiments with the type. A2-16 was fitted with an oleo undercarriage. A2-36 was a two-seat trainer version of the type (1). Sir George Jones recalls the conversion of the latter at the Point Cook workshops. "I had the job of fitting on the top wing and it affected the stability of the S.E.5a when you landed it. If you were not terribly careful with it, it would swing terribly violently when you landed. I tested it in the air and realized that it was very difficult to fly. It was taken up by Bostock and Bronwell and after they had flown it, they walked into my workshop and asked 'How did you get on with it?', and after I had explained to them they said 'Evidently you weakened the undercarriage. When we took it up and landed we crashed the undercarriage!'"(2) In general, the S.E.5a was well liked. In his book "Aces and Kings", L.W. Sutherland describes his love-hate relationship with A2-26 which he personally flew and serviced and which ended up breaking his neck! The S.E.5a served the RAAF faithfully until the arrival of 8 Bristol Bulldogs in 1930.



(R. Hourigan, via Historical Aircraft Archives)

In the early 1960s, bush walkers stumbled onto the remains of an aircraft which proved to be A2-11, the very S.E.5a that Denny had crashed in 1927. Not much of the airframe remained, but another S.E.5a has been preserved. A2-4 survives in the Australian War Memorial in Canberra. This S.E.5a was intended for destruction in 1929, but was brought up to display standard and presented to the War Memorial where it was displayed for many years in the silver-dope RAAF scheme. It has since been painted to represent C.9539, and aircraft of No. 2 Squadron, AFC, during the Great War.

(1) There is no recollection by ex-RAAF aircrews of this time that A2-36 was ever called the "Pig". This was the name applied to the portly Vickers Vulcan which was brought to Australia in the hope of obtaining a QANTAS order for the type, and was hangered with the S.E.5a at one stage. One source says that A2-36 was a special order from the Aircraft Disposal Company. Sir George's recollection tends to show otherwise.

(2) Interview with Sir George Jones, 1986.

Acknowledgements: Thanks to the Director-General of Co-ordination - Air Force, and to the Australian War Memorial for help in the preparation of this article.

Colin A. Owers (SAFCH #261), PO Box 73, Boorowa, NSW 2586, AUSTRALIA

#### RAAF S.E.5A

- A2-1 Crashed at Armidale (No. 3 Squadron) - approved to be reduced to produce 25 February 1928.
- 2 Not considered to be able to be brought to a state of airworthiness - approved to be reduced to produce 20 March 1928
- 3 Airframe never erected and still held in store. Considered unsafe due to age and decay of wood - approved to be reduced to produce 20 March 1928.
- 4 Approved for destruction instead of sale 27 May 1929. On 31 July 1929, approved for transfer to the Australian War Memorial.
- 5 Recommended and approved to be converted to parts, 22 April 1924.
- 6 RAF serial E3169. Recommended and approved to be converted to components 23 February 1926. Condition of aircraft due to crash.
- 7 Uneconomical to make airworthy - approved to be reduced to produce 20 March 1928.
- 8 As for A2-7.
- 9 As for A2-3.
- 10 As for A2-3.
- 11 Crashed into tree tops 10 May 1927 due to engine failure. Pilot Sgt. O.D. Denny. Approved for part salvage and remainder write-off 10 October 1927.
- 12 Approved for destruction instead of sale - 27 May 1929.
- 13 RAF serial D8476. Crashed No. 1 FTS, Point Cook 1 March 1926 - approved for conversion to spare parts 10 August 1926.
- 14 Crashed No. 1 FTS, Point Cook 1 October 1926 - approved for conversion to spare parts 4 December 1926.
- 15 As for A2-3.
- 16 As for A2-12. Oleo conversion.
- 17 As for A2-3.
- 18 As for A2-3.

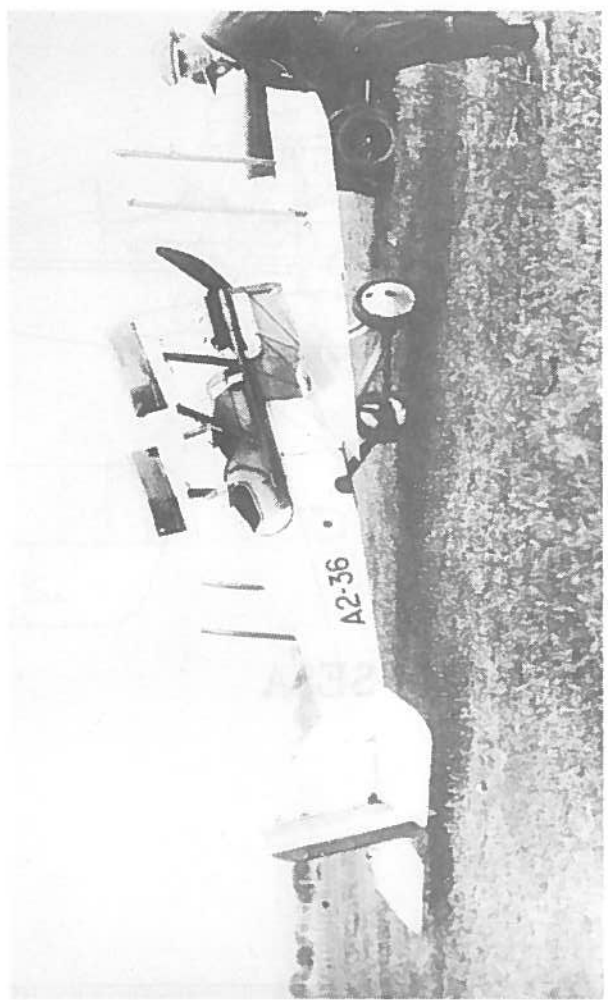
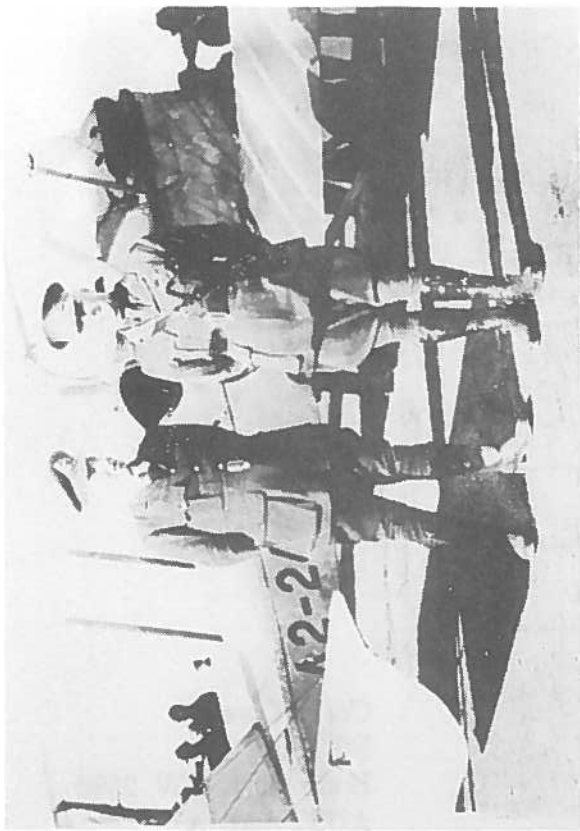
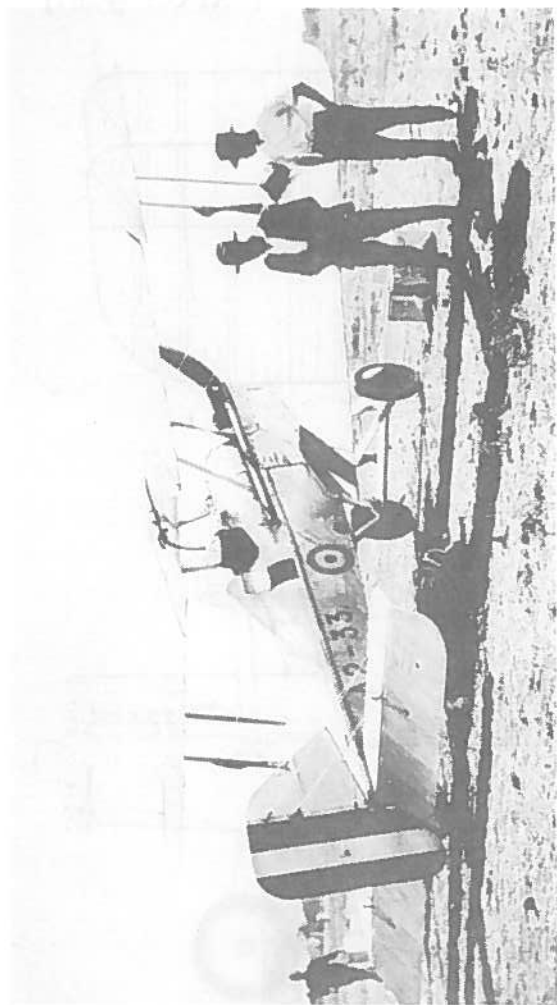
- 19 RAF serial D8490. Crashed at Point Cook 22 February 1927, killing pilot Cadet A. Dix - approved for write-off 24 March 1927.
- 20 As for A2-3.
- 21 Not flown in Australia - considered unairworthy - approved for conversion to produce 20 March 1928.
- 22 As for A2-3.
- 23 As for A2-12.
- 24 Crashed at Canberra 9 May 1927, killing the pilot Flying Officer F.C. Ewen - approved for write-off 27 June 1927.
- 25 Crashed during flying training at Point Cook - approved for conversion to components 15 July 1927. Components of this aircraft were later sent for testing at MSB Laboratory - the aircraft was officially written-off 16 February 1929.
- 26 Forced landed near Royal Military College, Duntroon, on 24 October 1926, extensively damaging airframe and engine. On strength of No. 3 Squadron - approved for airframe to be reduced to components and engine to No. 1 AD on 12 January 1927.
- 27 As for A2-2.
- 28 Flying accident at No. 1 FTS, Point Cook, on 19 February 1926 - approved for conversion to components 31 March 1926.
- 29 As for A2-3.
- 30 As for A2-3.
- 31 As for A2-12.
- 32 Crashed - approved for conversion to components 13 January 1926.
- 33 Crashed by F/O Swinburne near Rockbank during aerial welcome for Lord Stonhaven. Pilot escaped with slight injury. Approved for conversion to components 13 January 1926.
- 34 As for A2-3.
- 35 As for A2-7.
- 36 Approved for conversion to components 8 October 1926.
- 37 Two-seat trainer conversion.

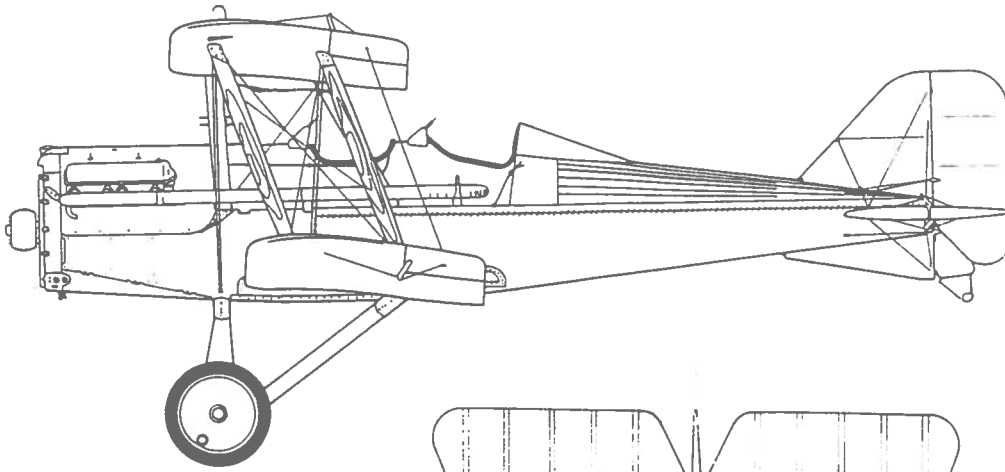
On 12 May 1930, one airframe was approved to be issued to the Sydney Technical College. No further details are available as to the identity and fate of this aircraft.

(Editor's note, This article is a corrected and updated version of an article the author published in the November 1984 issue of AIRCRAFT MODELWORLD.)

(Editor's note: Colin Owers has sent me several articles on early Chilean military aviation. These articles are in Spanish and he would like to have someone translate them for him. The article total 14 rather scantily printed pages with titles "Primeros Vuelos de Hircaviones en Chile", "Primera Participacion de la Aviacion Militar en Ejercicios de Tiro de Artilleria en el Culenar", "Emonia de Entrega de Dipomas a los Oficiales Alumnos del Curso de la Mision Scott", and "Bautizo del 'Guardiamarina Zanartu' Primer Bote Volador de la Aviacion Naval". You do not have to have read many issues of the SAFO to realize that Colin is a great supporter of the SAFO and a prolific writer and outstanding draftsman. It is a good bet that the information gathered from the translation of these articles will appear as an article in the not too distant future. Anyone wishing to help the cause by translating these articles, please contact the editorial office.)



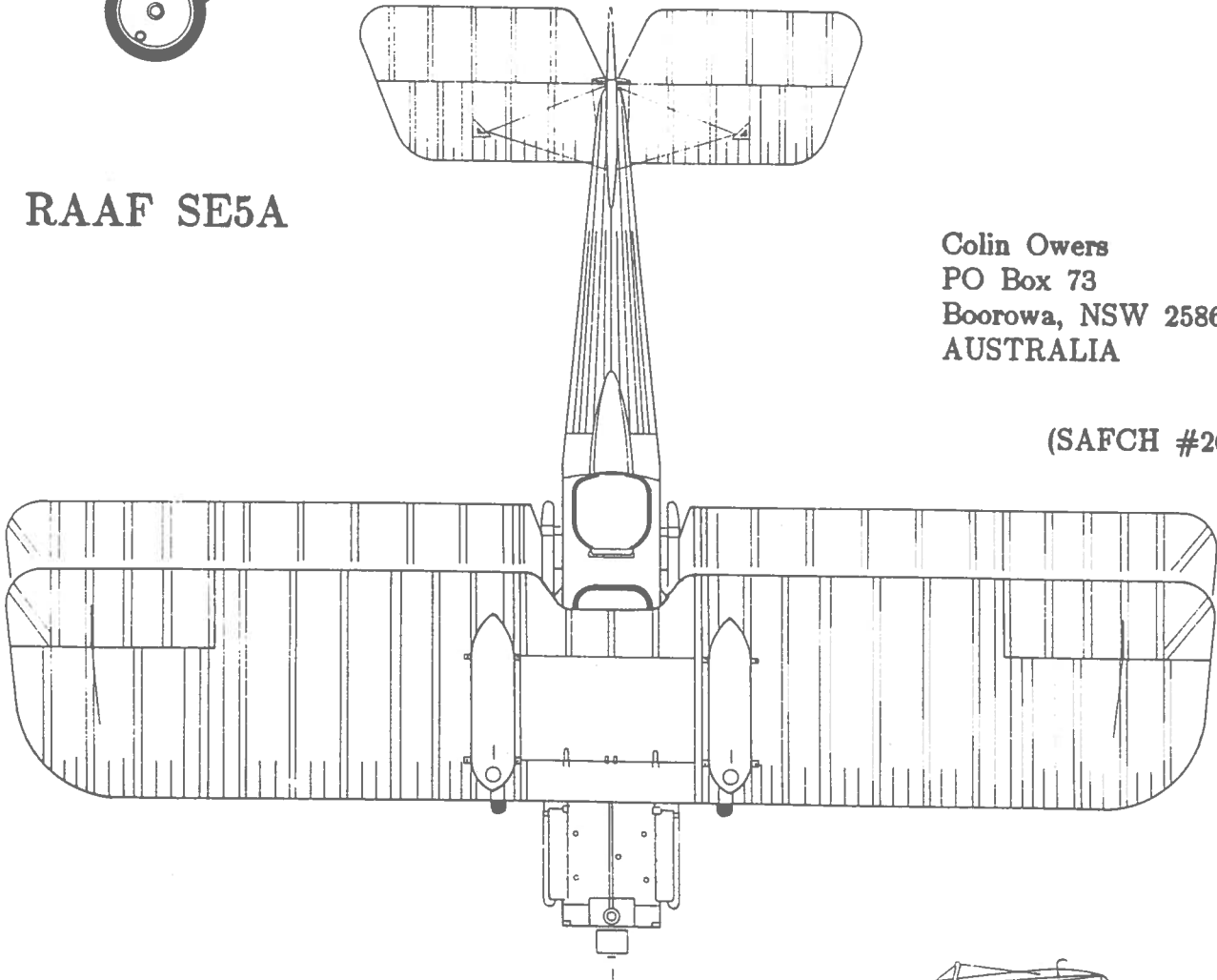




RAAF SE5A

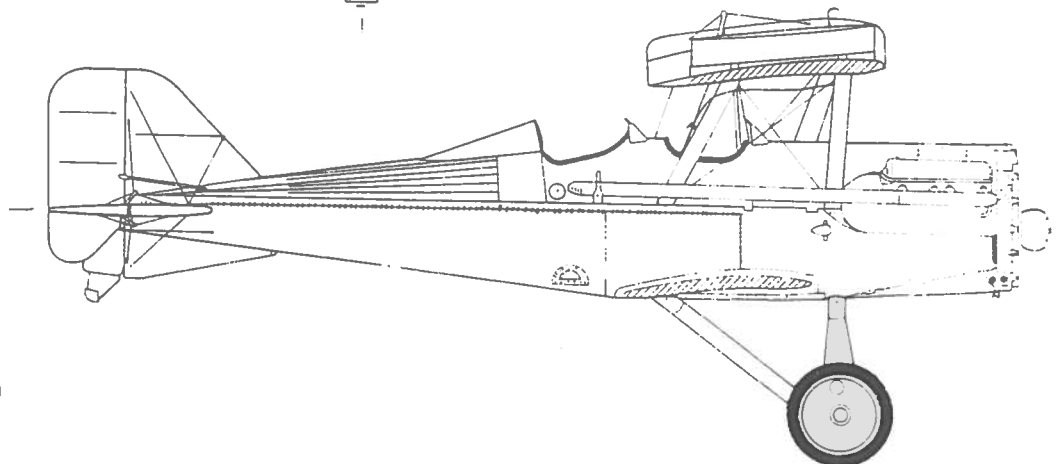
Colin Owers  
PO Box 73  
Boorowa, NSW 2586  
AUSTRALIA

(SAFCH #261)



1/48 scale

A2-36



A commercial source for those "legendary" epoxy-resin kits in 1/72 scale from Czechoslovakia is at last available. It is Aviation USK, 602 Front St., Box 97, Usk, WA 99180.

The kits available (in limited quantities) are: FJ-1 Fury (\$17.00), XF5F-1 (\$18.00), Ryan Fireball (\$16.00), Sikorsky R-4 (\$16.00), Polikarpov R-Z (\$18.00), Kyofu Rex (\$18.00), XP-55 (\$17.00), Curtiss R3C-1/C-2 (\$14.00), Breguet 19 (\$18.00), DFS Habicht (\$12.00), Romeo Ro-57 (\$16.00), Me-263 (\$15.00), Japanese Kikka (\$15.00), P-63A (\$15.00), Hansa-Brandenburg W-29 (\$20.00), Grunau 'Baby' II (\$12.00), Bristol M1-C (\$14.00), Salmson 2.A2 (\$15.00), Breguet 14B-2 (\$16.00), LVG Roland DII (\$14.00), Airco DH-5 (\$14.00), Armstrong-Whitworth FK-10 (\$16.00), Fokker T VIII (\$20.00), Northrop X-4 (\$12.00), Fokker D-23 (\$18.00), and Potez 25 A2 TOE (\$18.00).

The Hangar Bookshelf, PO Box 1513, Belleville, Ontario K8N 5J2, CANADA, is holding an "emergency stock reduction sale". The excellent squadron history, many of which have been reviewed in the SAFO, are available as follows: 408, 417, 418, 424, 433, 434, 4437, & 440 Squadron histories are CAN \$15.35 each. 416 Squadron History is CAN \$17.45. Some quantities are limited.

"American customers please note: To calculate the amount you should remit if you are sending a cheque in US funds just divide the Canadian price by 1.3 (e.g. 400 Sqn is \$15.35 Cdn divided by 1.3 = \$11.81 US). If you send us your Visa or Master Card number (don't forget the expiry date too) we will process it through at the Canadian price and your bank will make the conversion at whatever the prevailing exchange rate is at the time."

"Recently released is a slight revision of Jean Gisclon's DES AVIONS ET HOMMES now retitled LE DESILLUSION: ESPAGNE 1936. This work chronicles the experiences of three French mercenaries who flew fighter aircraft in the latter part of 1936 and the beginning of 1937. The story is in the form of a novel because the main characters were deceased at time Gisclon wrote the first version in the later 1960s. The new edition does not include the photos of the earlier book, but these have been reprinted several times by Patrick Laureau.

"Here are some details: (1) Gisclon, DES AVIONS ET DES HOMMES, Editions France-Empire, 68 rue Jean-Jacques-Rousseau, Paris 1, 1969 (287 pages). With photos of a typical Republican contract, a D-371 '12', Loire 46C 'No.6/NO-93' with Victor Veniel (Valbert), his mechanic, an I-15, a safe-conduct pass, an Ar 68E in Luftwaffe markings, etc. (2) Cisclon, LA DESILLUSION: ESPAGNE 1936, (Editons France-Empire (at same address but with new zip 75001), Paris, 1986 (286 pages). No photos, 89 French Franks (about #13.00) not including postage.

"If you can read intermediate French, you will have no problems. In these books, like in L'ESPOIR and in LA RANCON, by Julien Segnaire (Paul Bernier, co-commissar of the Malraux Squadron), history has been rendered freely and novelized. These books are good period pieces, but to approach what actually went on you must consult Laureau, Thornberry, Larrazabel, and others.

"Other news relating to the aircraft and aviation in the Spanish Civil War: (a) Wesley Moore of Guano has just released a 1/72-scale

kit of the I-15 that is much superior to and is devoid of many of the errors of the epoxy kit from Czechoslovakia. (b) Kovoavody Prostejov (KP) of Czechoslovakia has released a kit of the Letov S.231 which includes decals for a Spanish Civil War example. This kit is also superior to the epoxy kit and it is much cheaper. (c) The latest issue of 1919-1939 AIR WARS is devoted to articles on the Spanish Civil War."

Tom Sarbaugh (SAFCH #497), 21 Live Oak Rd., Berkeley, CA 94705

Sad news has been received from Ron V. Ferreyra of RVF, distributors of the excellent LEOMAN resin-molded kits. He report as follows: "We are very sorry to inform you that due to molding problems we have been forced to cease operations on the resin kits. These kits are no longer available and those people who have pending orders with us will be sent a refund. We thank you for your support and encouragement. LEOMAN is out of business."

This is a great loss to all modelers interested in the aircraft of the small air forces. LEOMAN's list of planned releases was very exciting; now most of these kits will probably never see the inside of a mold. I know you would want me to let Ron know how much we appreciated his efforts and to extend to him our sincerest wishes for success in his future endeavors. (The vacuformed kits of the Saunders Roe SRA/1 and Bristol T-188 are still available from the SAFCH Sales Service.)

Mil M-1 Hare, 1/72-scale epoxy cast kit, \$17.00. Model-Aire International, PO Box 159, Olema, CA 94950.

Model-Aire International has just come out with their third 1/72-scale epoxy cast kits, the Mil Mi.1 Hare. This kit can be built either as the Mi.1 (or its Polish-built equivalent SM-1) or as the Mi-1M (or SM.1W).

The fuselage consists on a single casting with excellent surface detail consisting of raised louvers and finely engraved panel lines. Some cleaning up will be required along the mold-separation line, which unfortunately passes over the louvers. The three little windows in the lower portion of the nose are solid and I do not know how much a problem it would be to cut these open. Small parts, cast on a single piece of epoxy with thin, flexible "flash", consist of the three main rotor blades, tail boom, tail rotor, seats, wheels, auxiliary fuel tank, and various antennae and struts. The molding of these parts is outstanding with excellent surface detail. All these parts should be useable after a quick clean up.

The difference between the Mi.1 and Mi.1M is accounted for by providing two different vacuformed transparencies for the cabin. These are sharply molded in clear plastic with finely engraved lines outlining the windows. The vacuformed part extends beyond the clear windows so there will be no problem in filling and sanding the seam between the plastic cockpit canopy and the epoxy fuselage.

The instructions consist of eight 8.5 in. by 11 in. pages with history, construction notes, detailing instructions, 1/72-scale drawings, drawing of instrument panel, and bibliography. The kit box includes drawings of an SM-1 in Egyptian markings and a SM-1W in Finnish markings. No decals are included.

This is an excellent kit, undoubtedly the best resin cast kit I have seen. It should be

easy to build, a joy to detail, and impressive when complete. I can highly recommend this to any modeler, especially one looking for his first resin cast kit. The Mi.1 is available through the SAFCH Sales Service.

Other resin-cast kits in 1/72 scale available from MAI include the Yak-11 (\$17.00) and the North American AGM-28 Hound Dog (\$12.00). Their next release will be the Fairchild PT-19 (\$17.00). This should be a popular kit, so if you send a stamped, self-addressed post card with the caption 'PT-19' on the back to MAI, you will be notified and a kit will be reserved for you.

Aerofax Datagraph #2: NORTH AMERICAN X-15/X-15A-2 by Guenther, Miller, and Panopolis; 64 pages, soft cover, \$9.95 from Aerofax Inc., PO Box 120127, Arlington, TX 76012.

"This is the first comprehensive account of the X-15's birth, design development, manufacture, and flight test program. All facets of the X-15 are covered in typical Aerofax fashion, with an accurate and very comprehensive text complementing numerous rare and previously unpublished photographs. Shown for the first time are design studies calling for two-place Bell, Douglas, North American, and Republic two-place configurations, cockpit photographs illustrating both the standard X-15 and the X-15A-2, and an exhaustive photo essay detailing all physical aspects of both configurations. Presented for the first time is a complete flight log listing not only the successful missions, but also the aborts and mission objectives. Containing over 30,000 words of text, 200 photos (including 4 pages of color), an eight-page fold-out, and numerous drawings, all aspects of the X-15 and X-15A-2 are covered in extraordinary detail."

Review copy supplied by Aerofax. The review copy is on sale through the SAFCH Sales Service with the proceeds going to Aerofax.

Aerofax Datagraph #1: NORTH AMERICAN F-51 MUSTANG IN LATIN AMERICAN AIR FORCE SERVICE, Dienst and Hagedorn; 64 pages, softbound, \$9.95 from Aerofax Inc., PO Box 120127, Arlington, TX 76012

Mustang enthusiast John Dienst and Latin American aviation expert (and SAFCH member) Dan Hagedorn have produced an outstanding book that should be in every SAFCH members library. I've reviewed a lot of books in 40 issues of the SAFCH, but this is the first one I can unreservedly recommend to everyone, no matter what geographical area or time period is their main interest. This recommendation is based on the universality of the subject matter, the high quality of writing, the superb photo reproduction, the high standard of the production, and the reasonable price (you can hardly get a decent meal for \$10.00 and this book will stick with you a lot longer than last-night's pizza).

Produced in the high quality we have come to expect from Aerofax, coupled with the detailed research of Dan Hagedorn, MUSTANGS IN LATIN AMERICA is a feast for both the eye and the mind. The presentation begins with 18 pages of three-column, small-print text covering the use of the Mustang in the Dominican Republic (it is so great not to have it called "Dominica" as in many English publications), Haiti, Uruguay, Guatemala, Nicaragua, Costa Rica, Bolivia, Cuba and Venezuela, and El Salvador. This section has 30 photos dispersed throughout the text. Next

is 8 pages of "Individual Aircraft Tables" listing all 185 Mustangs known to be used by Latin American air forces. These tables include (1) Country Serial Number, (2) Type, (3) Previous Identity, (4) Date Acquired, and (5) Notes. Twelve pages of photos follow, each with 8 black-and-white photos of aircraft. The covers and the center-section fold-out contains 9 color photos of aircraft. Also in the center-section are 8 side-view drawings [Costa Rica, Cuba, Guatemala (2), Haiti (2), El Salvador, & Uruguay] and a 3-view drawing of a Nicaraguan F-51. The final 18 pages are devoted to photos of the interior (including 3 of the cockpit interior in color) and of external details of ex-Guatemalan Air Force Mustangs currently in storage in the USA. Sprinkled through these 18 pages are 17 drawings of interior details taken from a technical manual of some sorts. These last 18 pages will be extremely valuable to anyone building a model of the Mustang.

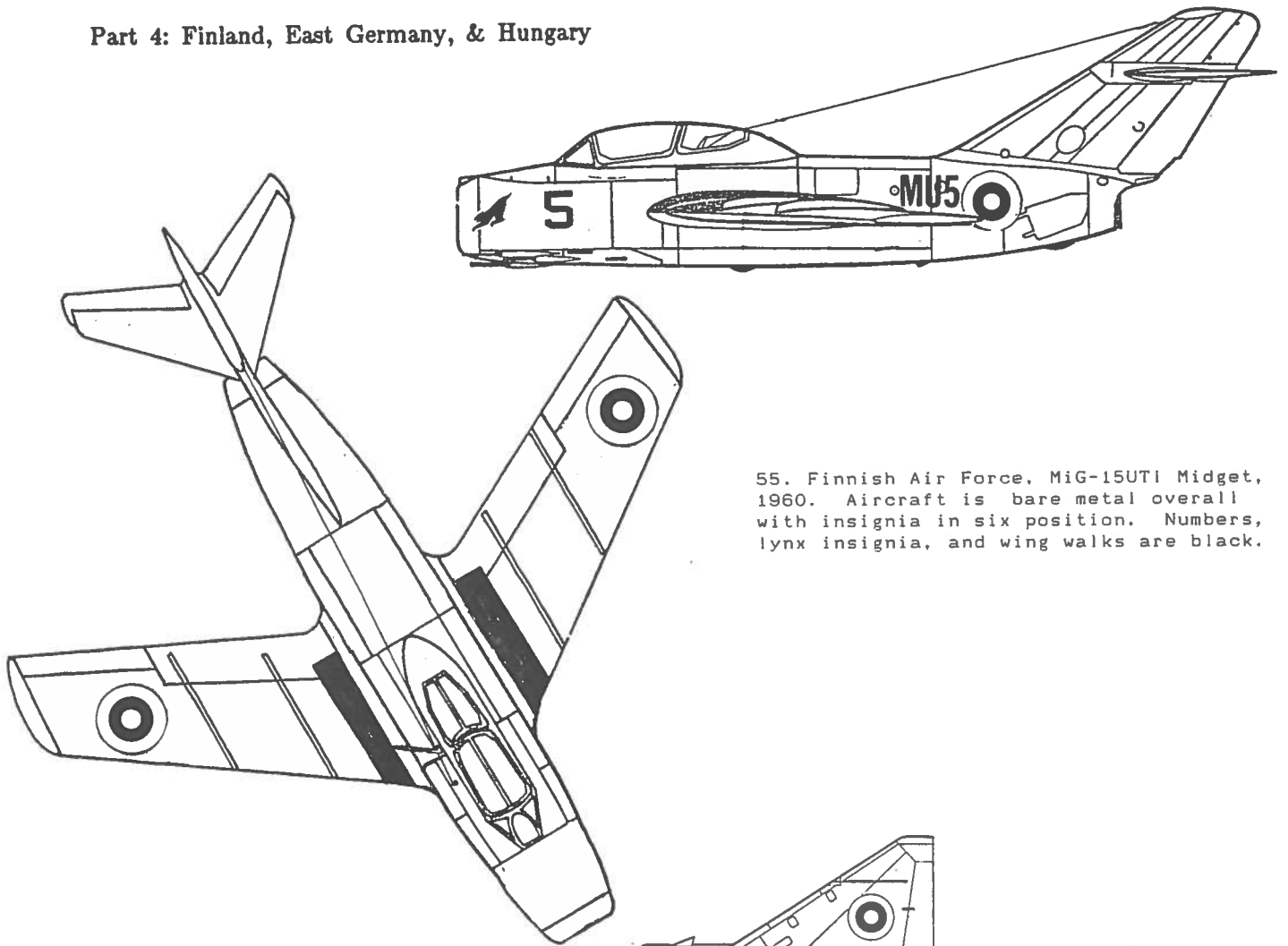
I find it hard to make up my mind what I like best, the comprehensive text which exhaustively describes the acquisition, service use, and ultimate disposition of the Mustangs that served in each air force; or the selection of photos showing the aircraft before they were acquired, during service in Latin America, and after their disposal. I found the history fascinating, partly because it effectively exploded my erroneous belief in squadrons of Mustangs being sent to Latin America, where they would serve normal careers, and be written off. History, especially the history of Latin America, is not that simple. Instead we have aircraft being obtained by a variety of overt or covert means, serving dictators as well as democracies, used as much for propaganda as for military purposes, and frequently fighting on both side in civil or national wars. It is difficult to pick out any "highlights". There is the description of the Mustang operating during the civil war in the Dominican Republic, during border incursions between the Dominican Republic and Haiti, during the civil war in Haiti, during the invasion of Guatemala by rebels from Nicaragua, in action against internal guerrillas in Guatemala, and during invasion of Guatemala by rebels from El Salvador. Mention is made of Nicaraguan F-51's and the Bay of Pigs, and an F-51 in Sandanista markings. The Mustang assisted Costa Rica in resisting invasion of rebels from Nicaragua, it participated in many coups in Bolivia, and was instrumental in the suppression of the Che Guevara insurgency in Bolivia. However, if forced to pick out one incident for special mention, I would choose the so-called "Soccer War" between Costa Rica and Honduras. This conflict has undeservingly earned a "comic-opera" reputation that is effectively dismissed by the description in this book. It is of interest to note that the last F-51 lost in air-to-air combat was the El Salvadorean Mustang that was shot down by a Honduran Corsair on 17 July 1969.

Reading this history will cause all but the expert, or the dogmatic, to alter his (or her) conception of the history of Latin America since the end of WWII and of the United States' place in this history. After finishing this book, I can guarantee that you will read your daily newspaper with a new understanding and maybe an even deeper depression.

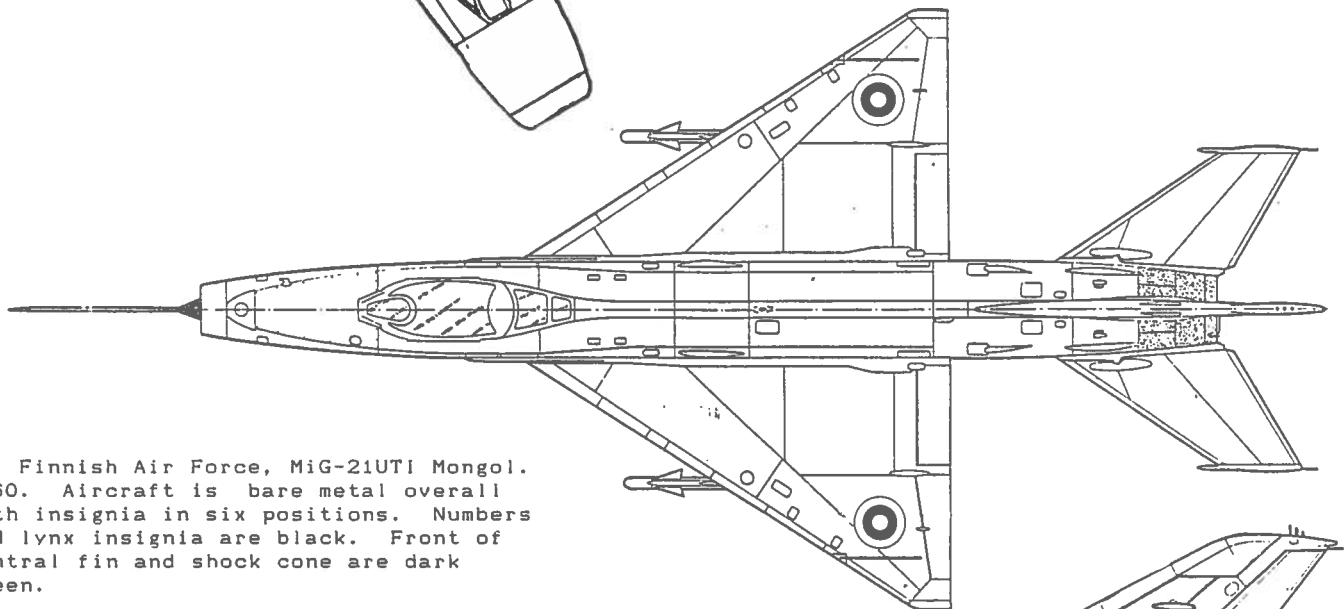
After all these rather "heavy" lessons in modern history, it is a welcome change of pace  
(Continued on page 111)

# MiG MANIA

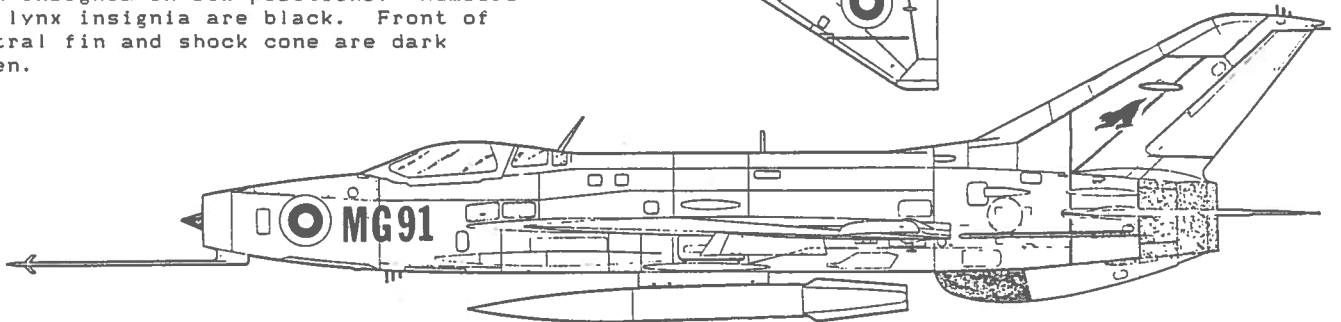
## Part 4: Finland, East Germany, & Hungary

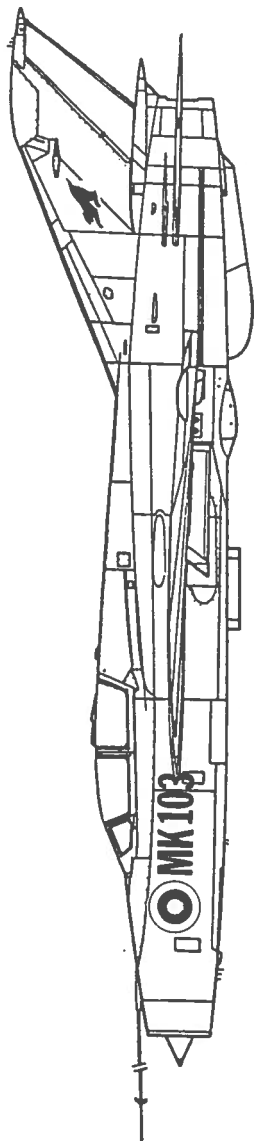


55. Finnish Air Force, MiG-15UTI Midget, 1960. Aircraft is bare metal overall with insignia in six position. Numbers, lynx insignia, and wing walks are black.

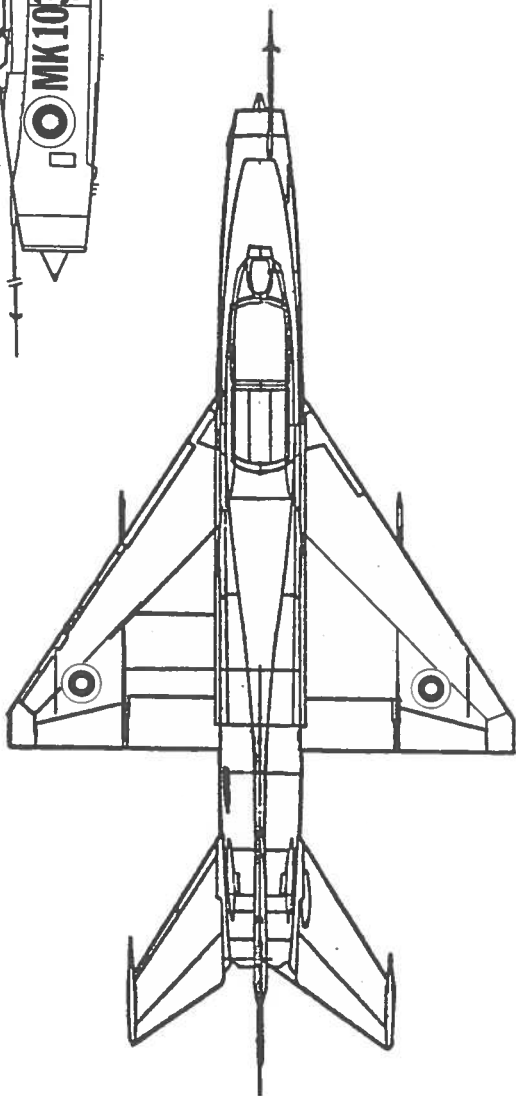


56. Finnish Air Force, MiG-21UTI Mongol, 1960. Aircraft is bare metal overall with insignia in six positions. Numbers and lynx insignia are black. Front of ventral fin and shock cone are dark green.

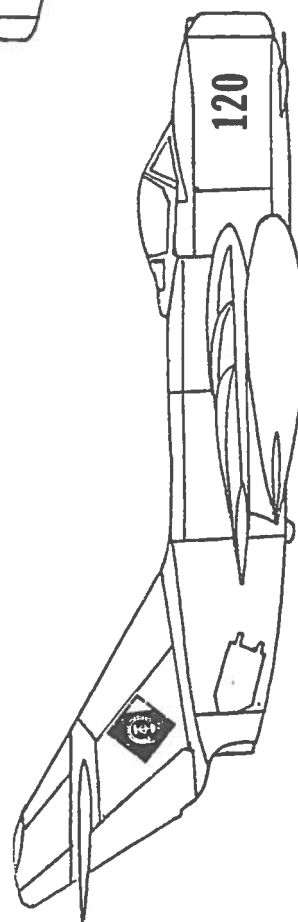
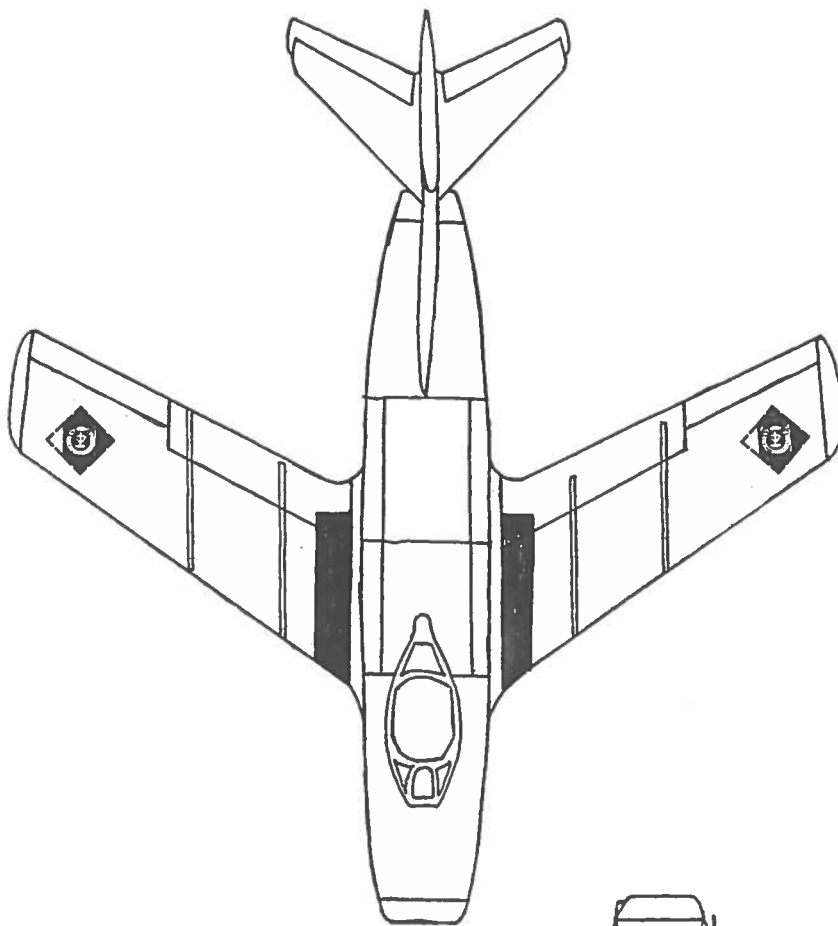


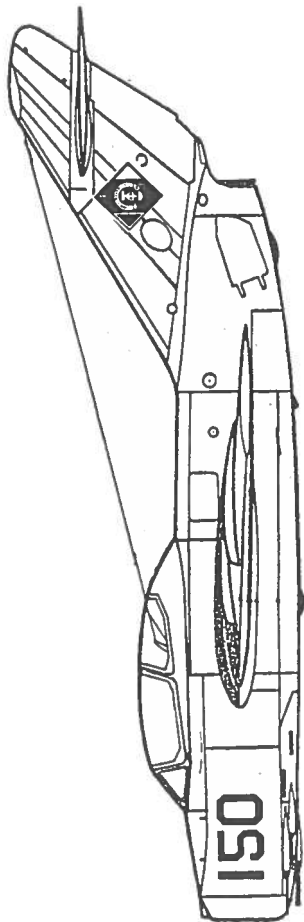


57. Finnish Air Force, MiG-21F Fishbed C. 1960. Aircraft is bare metal overall with insignia in six positions. Numbers and lynx insignia are black. Front of ventral fin and shock cone are dark green.

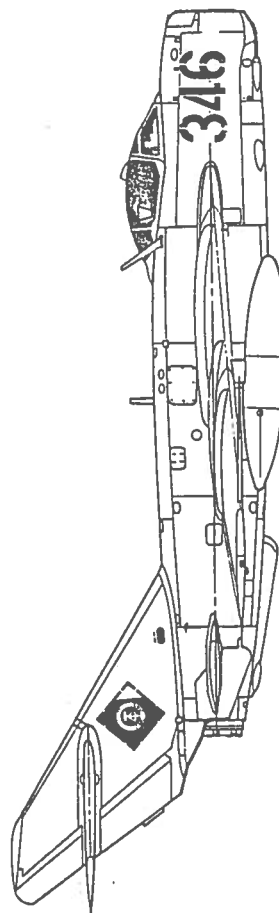
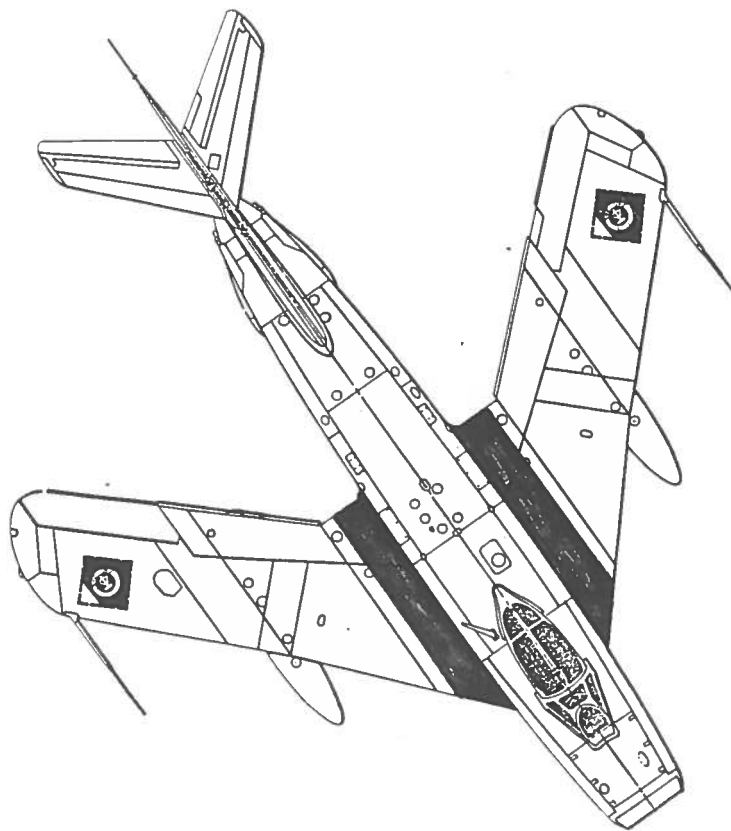
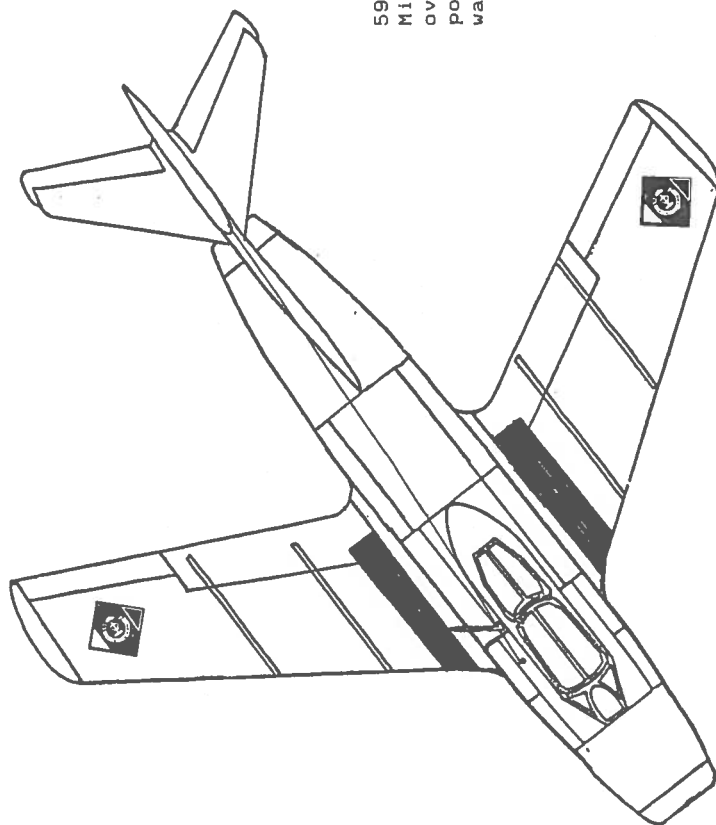


58. East German Air Force, MiG-15 Fagot, 1956. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers and wing walks are black.





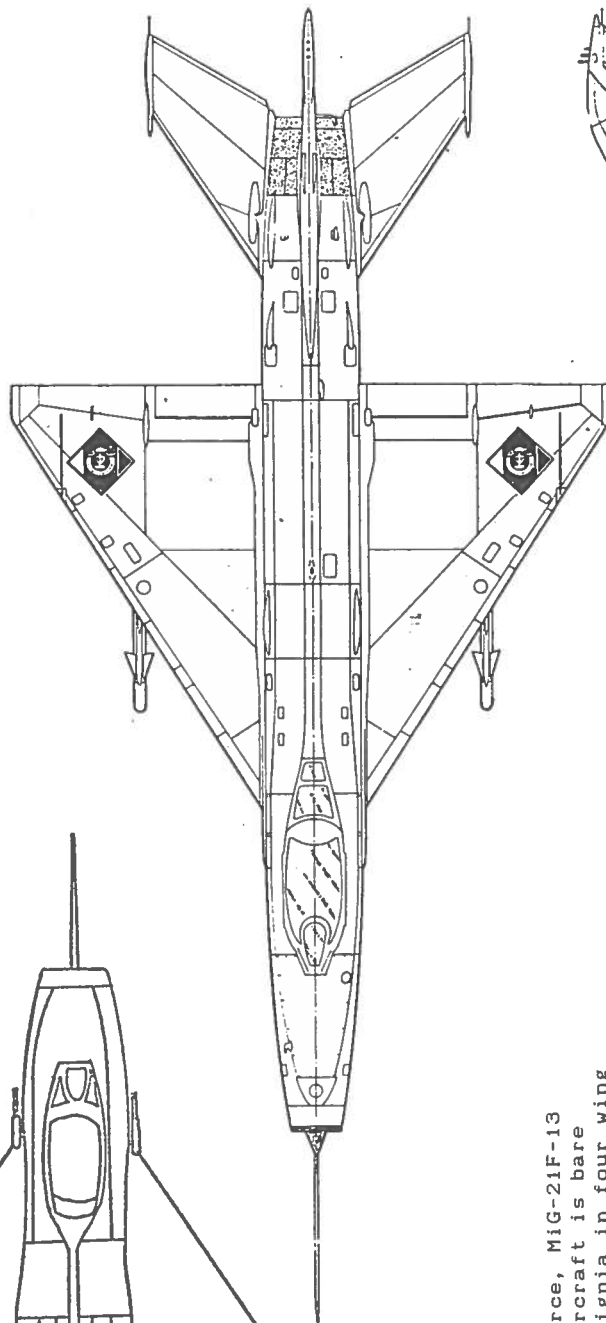
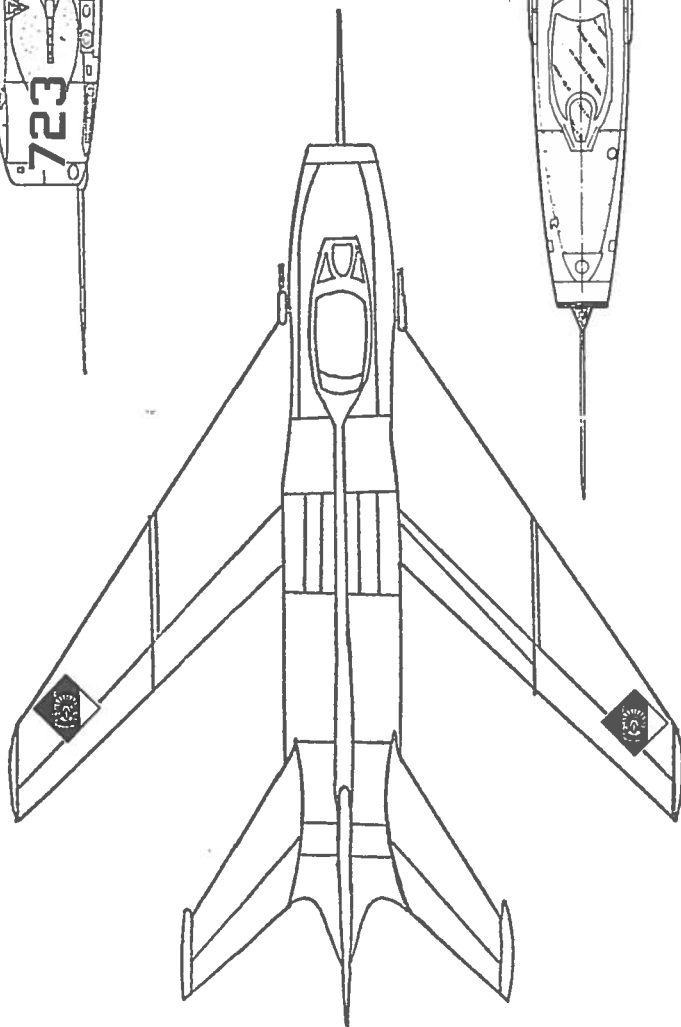
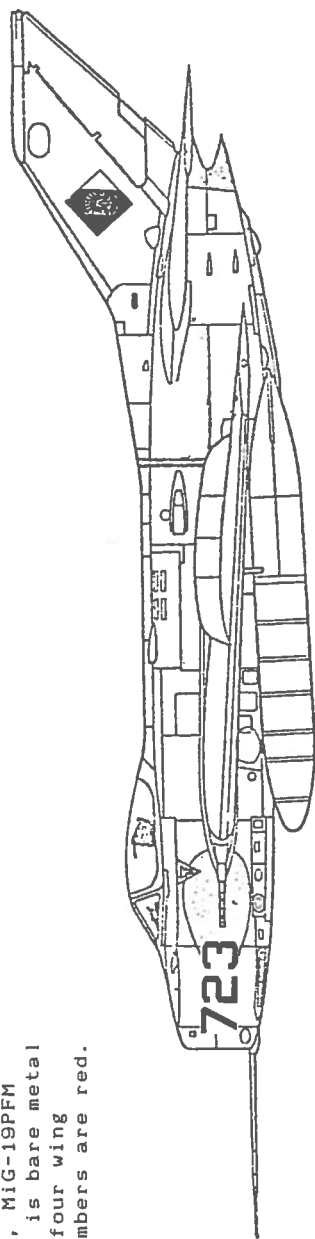
59. East German Air Force, MiG-15UTI Midget, 1960. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers and wing walks are black.



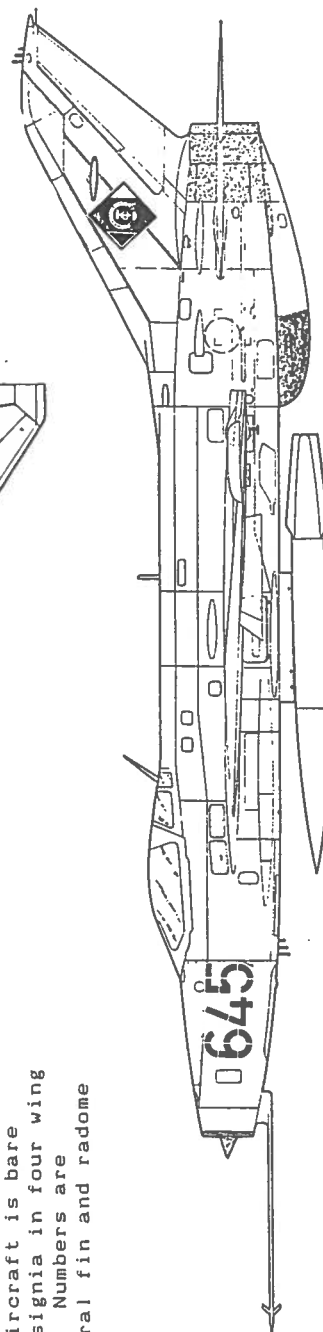
60. East German Air Force, MiG-17 Fresco, 1960. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers are red and the wing walks are black.

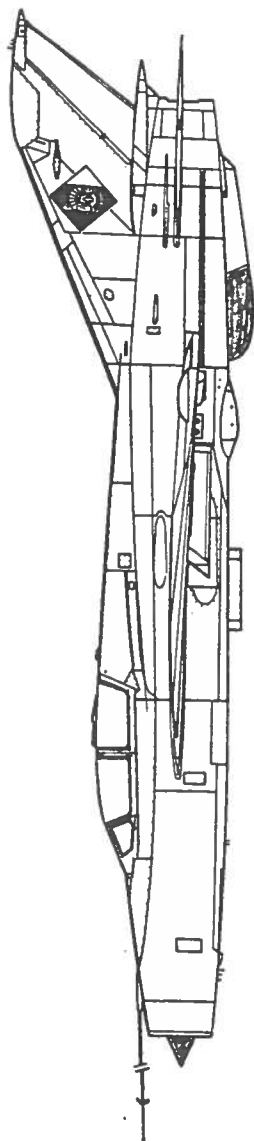


61. East German Air Force, MiG-19PFM Farmer D, 1964. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers are red.

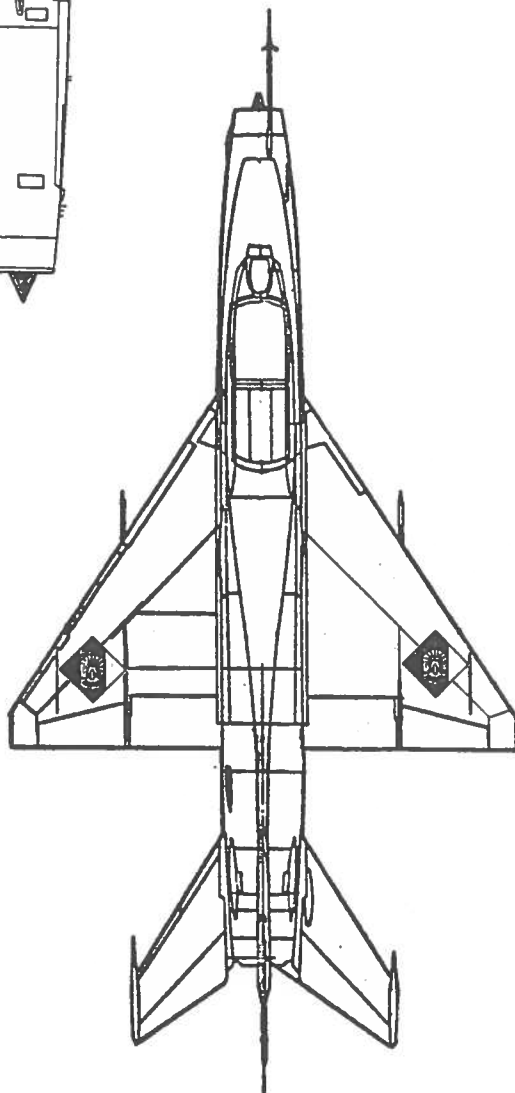


62. East German Air Force, MiG-21F-13 Fishbed C/E, 1965. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers are black. Front of ventral fin and radome are dark green.

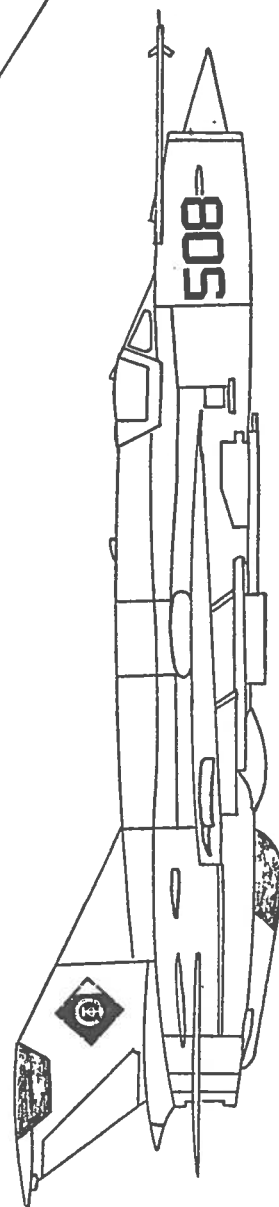
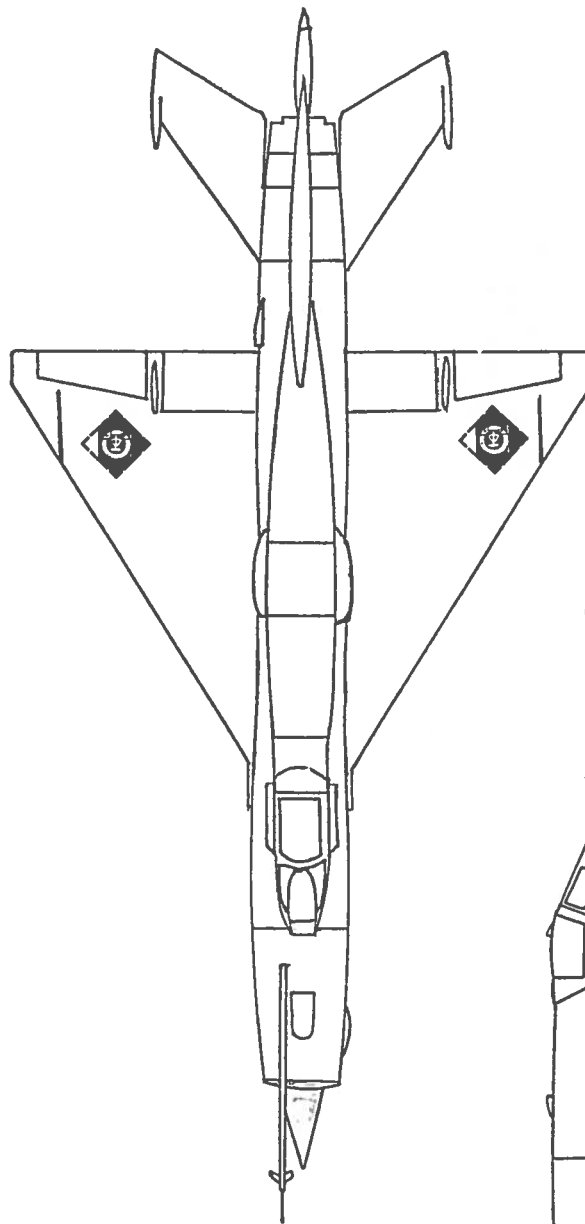


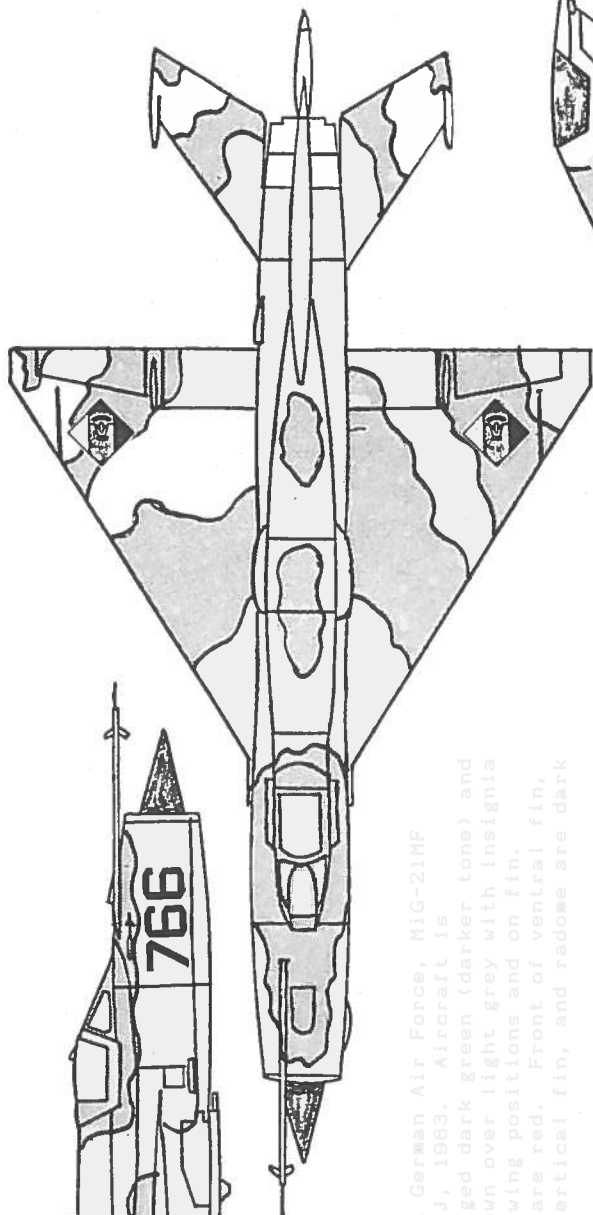
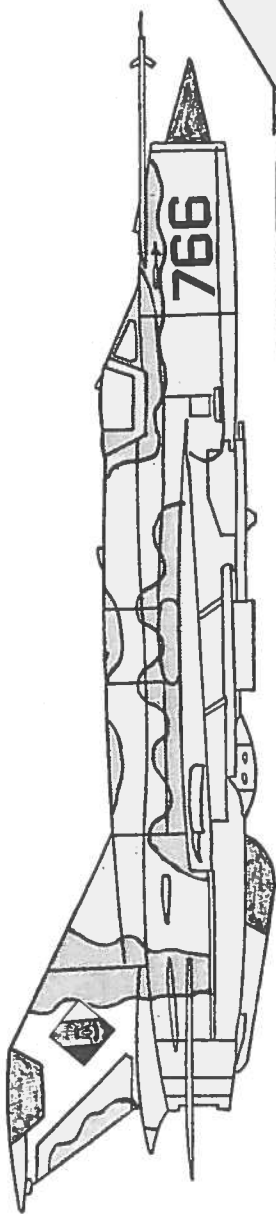


63. East German Air Force, MiG-21UT1 Mongol, 1978. Aircraft is bare metal overall with insignia in four wing positions and on fin. Front of ventral fin and radome are dark green. No numbers were carried on this aircraft, but some East German Mongols have been observed with black numbers (232 & 373) on the nose.

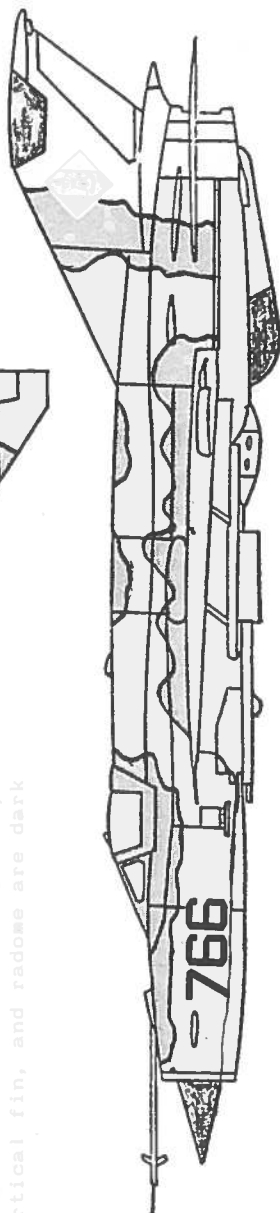
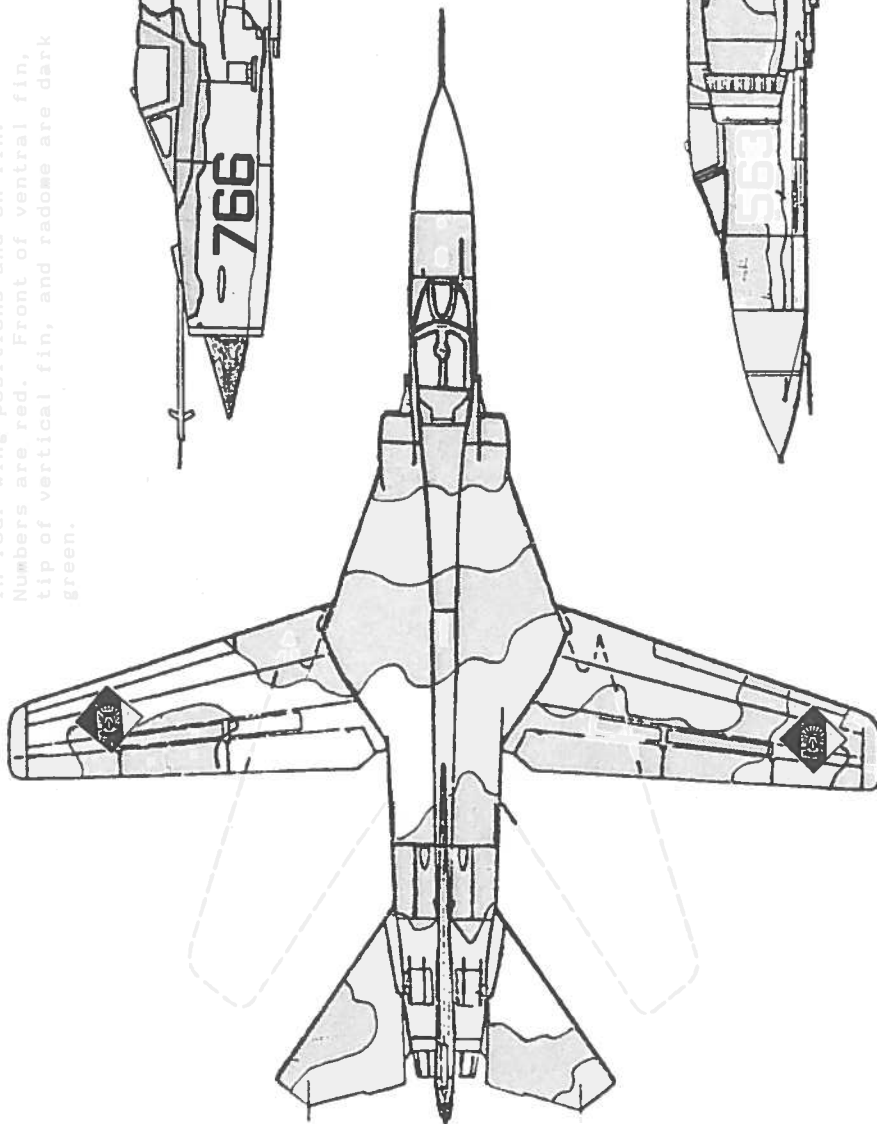


64. East German Air Force, MiG-21MF Fishbed J, 1983. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers are black. Front of ventral fin, tip of vertical fin, and radome are dark green. Ring on nose is red.

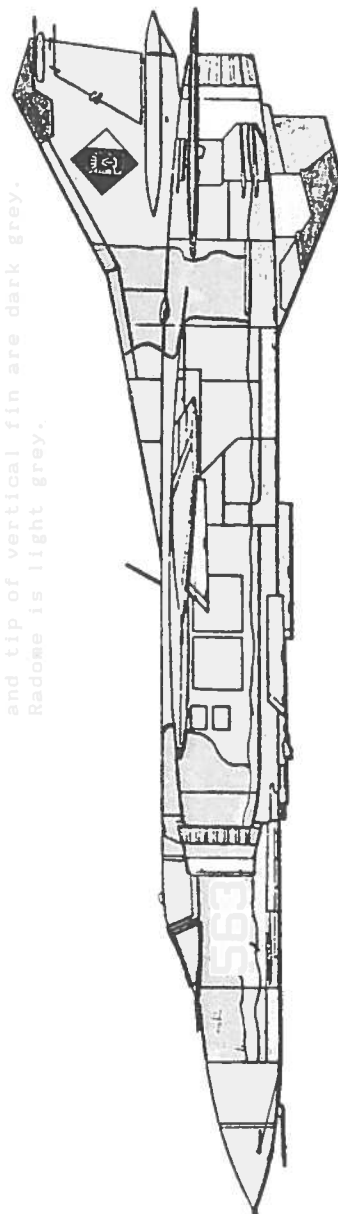




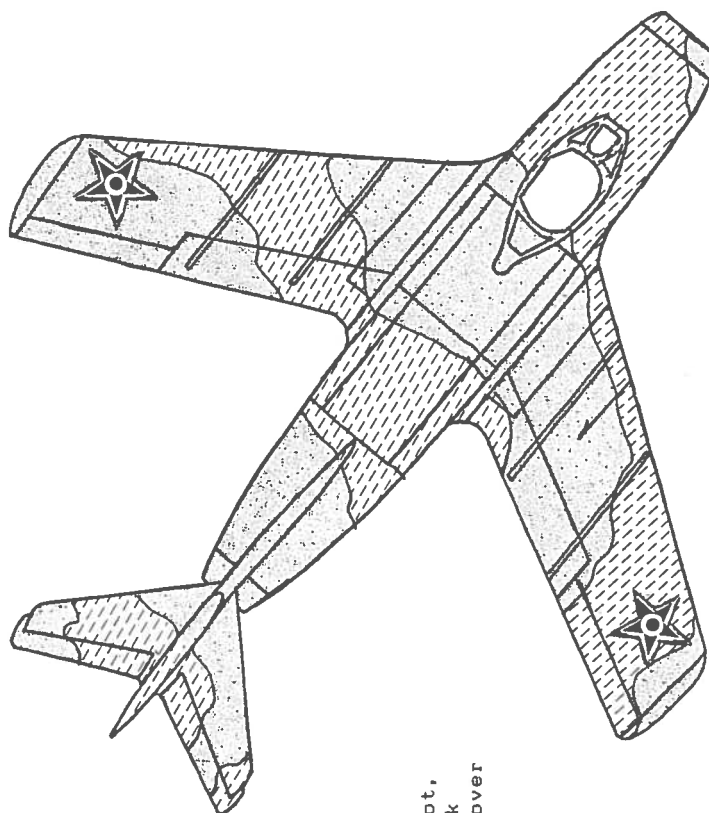
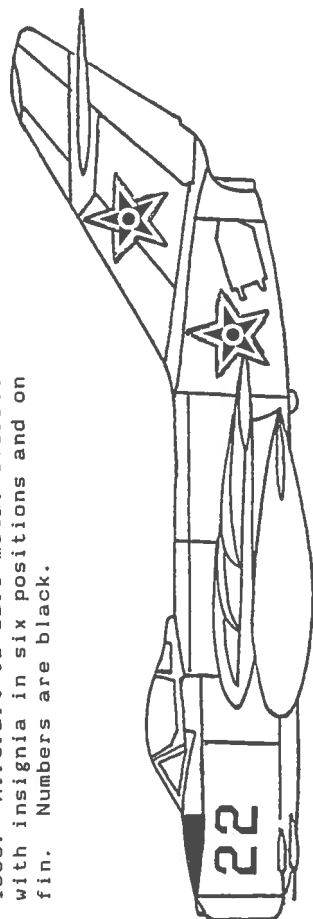
65. East German Air Force, MiG-21MF Fishbed J, 1983. Aircraft is camouflaged dark green (darker tone) and dark brown over light grey with insignia in four wing positions and on fin. Numbers are red. Front of ventral fin, tip of vertical fin, and radome are dark green.



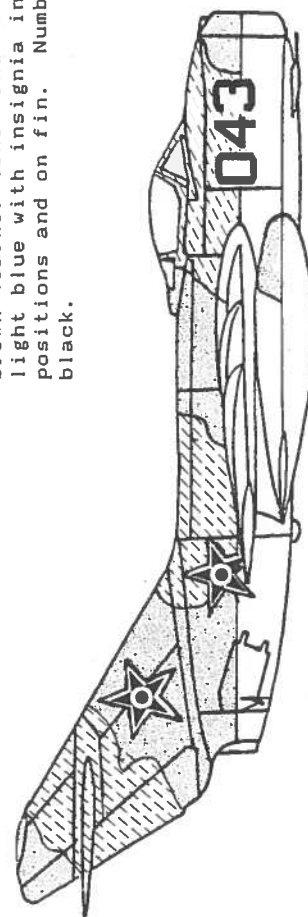
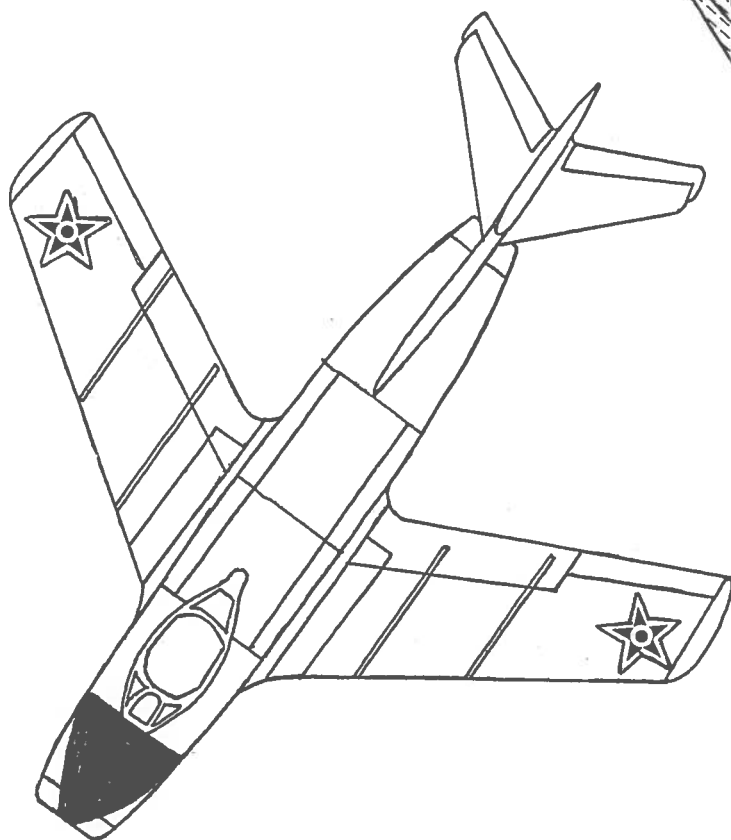
66. East German Air Force, MiG-23MF Flogger E, 1983. Aircraft is camouflaged dark green (darker tone) and red brown over light grey with insignia in four wing positions and on fin. Numbers are red. Front of ventral fin and tip of vertical fin are dark grey. Radome is light grey.

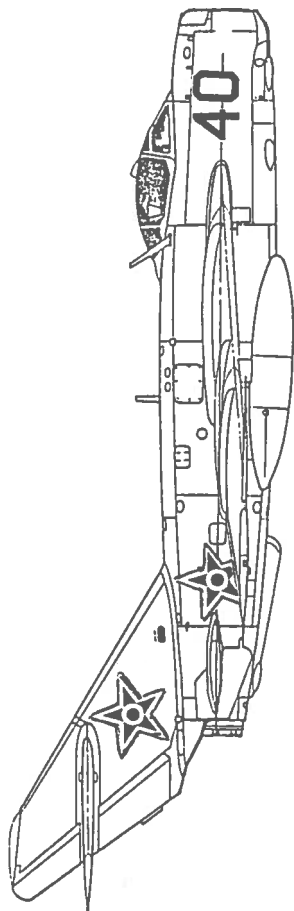


67. Hungarian Air Force, MiG-15 Fagot, 1956. Aircraft is bare metal overall with insignia in six positions and on fin. Numbers are black.

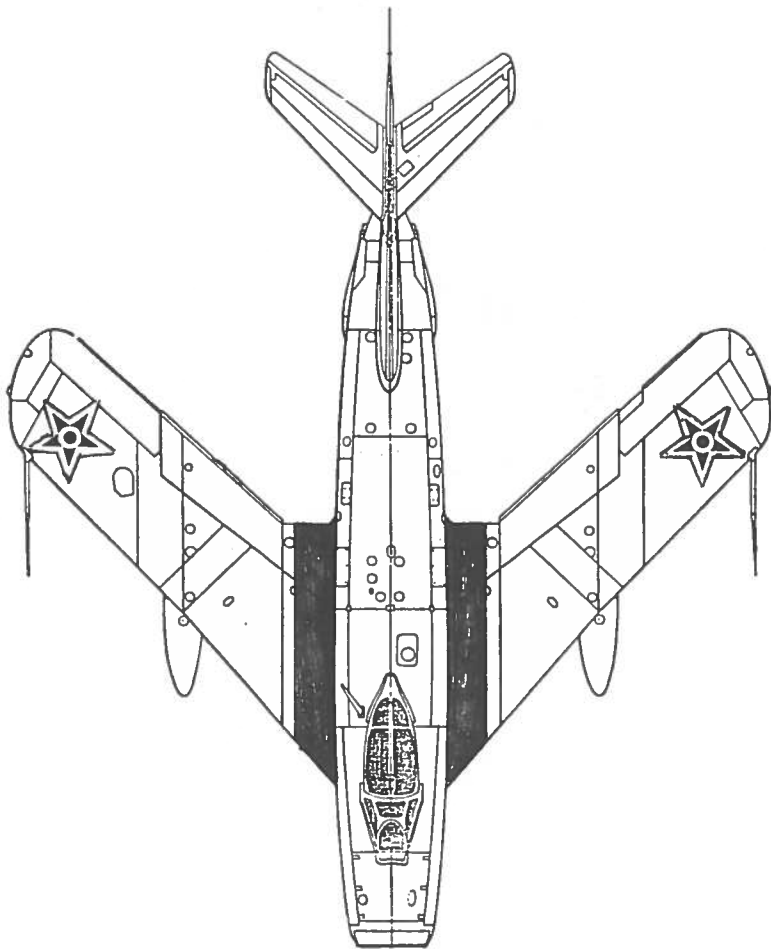
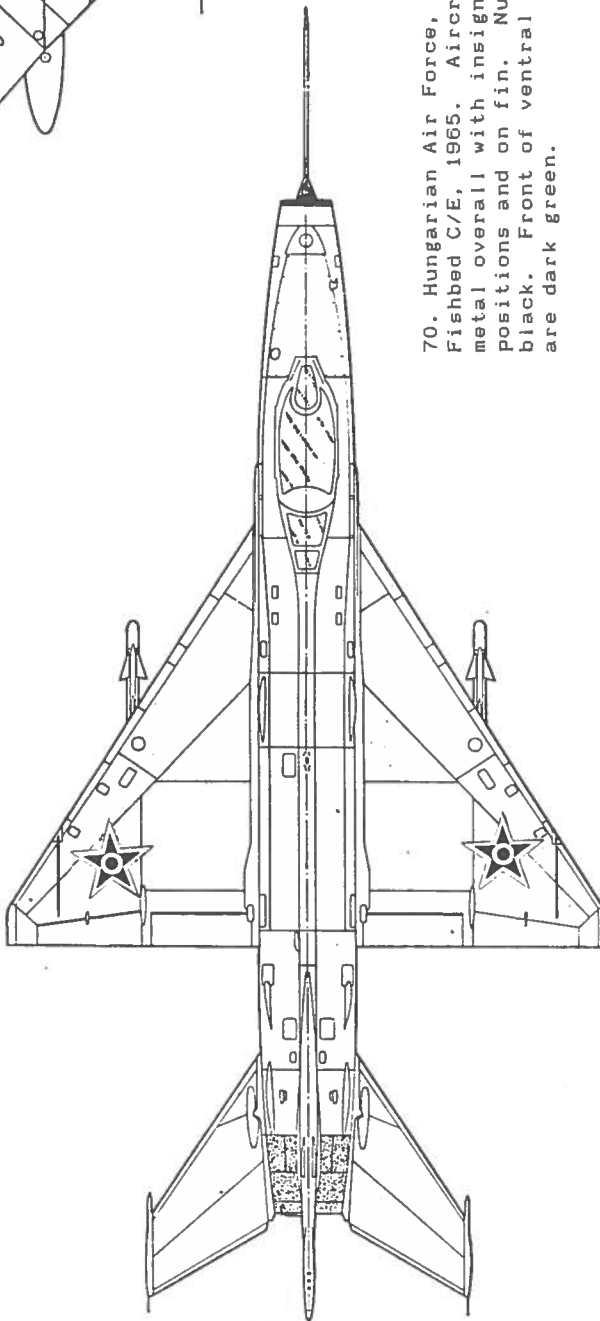


68. Hungarian Air Force, MiG-15 Fagot, 1956. Aircraft is camouflaged dark brown (darker tone) and dark green over light blue with insignia in six positions and on fin. Numbers are black.

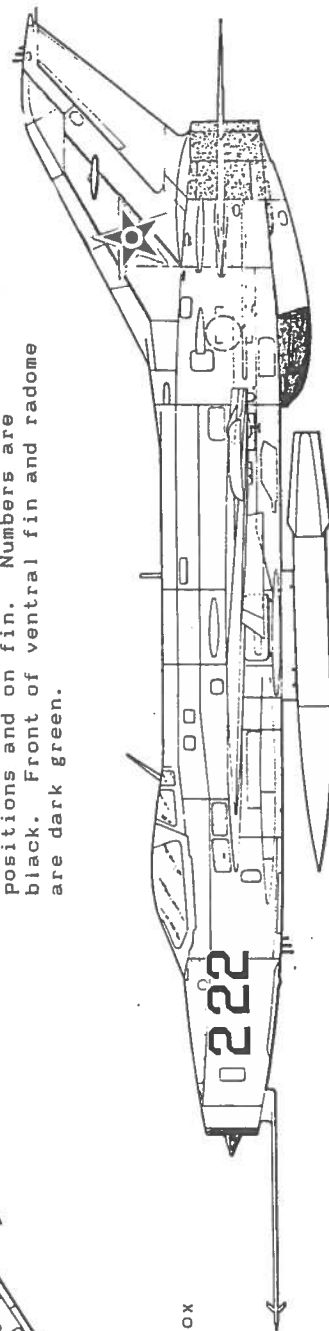




69. Hungarian Air Force, MiG-17 Fresco C, 1970. Aircraft is bare metal overall with insignia in six positions and on fin. Numbers and wing walks are black.



70. Hungarian Air Force, MiG-21F-13 Fishbed C/E, 1965. Aircraft is bare metal overall with insignia in four wing positions and on fin. Numbers are black. Front of ventral fin and radome are dark green.



Nicholas Waters (SAFCH #2), RD 4, Box 68, Claremore, OK 74017

(Continued from page 102)

to look at the photos and imagine what schemes you will use when you build your next model of a Mustang. To give an idea of the photo coverage, here is a list of the approximate number of photos that show the Mustang the markings of each country: the Dominican Republic (25), Haiti (5), Uruguay (4), Guatemala (10), Nicaragua (4), Costa Rica (1), Bolivia (5), Venezuela (1), El Salvador (10). These are only the photos that show the aircraft during military service. Many other photos are useful to the modeler because they show the aircraft after disposal without marking, but still in authentic color schemes.

Since the goal of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries", it is not entirely improper for me to plead with every SAFO reader consider adding this book to his or her library. If the response is large enough, and if everyone mentions that he is a member of the SAFCH, Aerofax should be emboldened to produce more books on small-air-force subjects. Perhaps a book on the history of the F-47 in Latin America would be an appropriate companion volume for NORTH AMERICAN F-51 MUSTANGS IN LATIN AMERICAN AIR FORCE SERVICE.

Review copy kindly provided by the publisher.

AIR ACES OF THE AUSTRO-HUNGARIAN EMPIRE 1914-1918 by Martin O'Connor. 22 cm by 29 cm, 336 pages, hardbound, \$40.00 plus shipping from Champlin Fighter Museum Press, 4636 Fighter Aces Dr., Mesa, AZ 85205.

"This is an unusual book about an unusual topic. It is the first treatment of the lives and careers of the 49 axes (airmen with five or more aerial victories) of the Austro-Hungarian Empire during World War I. On a larger scale, it is the story of an empire with an agrarian economy and a feudal social system, trying to fight a 20th century war. On a finer scale, it is the story of the sacrifice, devotion and courage of individual airmen who, despite enormous obstacles, carried the war to their enemy until the last days of the conflict.

"Accompanying the extremely detailed text are 252 photos of almost uniformly superb quality -- most of which have never been published. There are 16 pages of color artwork by internationally noted aviation illustrator Ray Rimell of Britain. A total of 50 aircraft flown by the aces are shown in profile, while top views of 16 aircraft also are included. 'Methuen Handbook of Color' references and detailed documentation of authenticity are provided for all colors used.

"This volume's appendices include: (1) Overview of the Austro-Hungarian Army Air Service and its aircraft serial number system. (2) Two highly-detailed maps of frontline areas, including many names familiar to historians but impossible to find on current maps. (3) The serial numbers of all the aces' aircraft. (4) Extensive victory lists containing nine columns of information for each of the nearly 600 victories scored by the aces. (5) An extensive bibliography, plus a detailed index of names."

The above description, taken from the publisher's announcement, provides all the important facts, but it fails to convey the true value of this magnificent book for SAFO readers. The Austro-Hungarian Empire contained many ethnic groups; beside the Austrians and Hungarians, the Empire included Czechs, Poles,

Slovaks, and Slovenians to mention but a few. All these nationality are represented in the list of Austro-Hungarian aces. After the fragmentation of the Empire, many of those who survived the war went back to their homelands to play an important role in establishing aviation in these new countries. SAFCH member Martin O'Connor describes not only the war-time exploits of these aces, but their origins and their post-war careers. In these descriptions, there is much to interest the small-air-forces side of the readers curiosity.

Let's take a brief look at some of the aces with connections to countries other than Austria and Hungary. (The Hungarians are reluctantly omitted since most of those who survived the war went on to fight with the Hungarian Red Air Corps; but there are too many Hungarian aces to describe in this review.) (1) Goodwin Brumowski, with 35 confirmed victories the leading Austro-Hungarian ace, was born in Wadowice, Poland. Also born in this same town was the man who would later become Pope John Paul II. After the war, Brumowski moved to his wife estate in Transylvania, but he returned to Vienna in 1930 to start a flying school. (2) The number four ace (27 confirmed victories), Frank Linke-Crawford was born in Krakow, Poland. A color profile illustrates his Hansa-Brandenburg D.I (28.40) with a large red and white four-segment checkerboard as a personal insigne. I wonder if this has anything to do with the adoption, after the war, of this insignia by Stefan Stec which lead directly to the Polish Air Force insignia? Linke-Crawford was killed during the war. (3) Friedrich Navratil (10 confirmed victories) was born of Croatian parents in Sarajevo. After the war he joined the Yugoslav Air Force, and after the German conquest served as Minister of Defense of the puppet state of Croatia. When he protested German persecution of the Serbs in Croatia, he was removed from office, but this did not prevent his trial and execution by a "people's court" after the war. (4) Otto Jindra (9 confirmed victories) was Czech. After the war he was instrumental in establishing the Czechoslovak Air Force and later became its Commander in Chief. (5) Heinrich Kostrba (8 victories) was born in Prague. After the war he help establish the Czech Army Air Corps and became its first commander. (6) Karl Nikitsch (6 victories) was also born near Prague. After the war he commanded the undercover Austria air force. (7) Franz Peter (6 victories) was born in Vienna. During the war he served alongside many pilots of Polish origin; the photos of his aircraft also show an Albatros D.III (253.117) of Stefan Stec decorated with the personal insigne so familiar from Stec's Polish Air Force Fokker D.VIII of 1919. After the war, Peter joined the Polish Air Force to fight in the Russo-Polish War of 1919-1920. Later he designed airplane engines called "Peterlot". With the German invasion of Poland in 1939 he escaped first to Rumania and then to Paris where, after the Fall of France, he was captured by the Germans and sent back to Poland. Under the threat of shipment to a concentration camp, he served as inspector-controller at the ex-Szomanski factory. He survived the war and remained in Poland. (8) Johann Lasi (5 victories) was born of Croatian parents and after the war he probably became a Yugoslav citizen. (9) Kurt Nachod (5 victories) was born in Brno, Czechoslovakia.

He died during the war in an aircraft accident. (10) Augustin Novak (5 victories) was born to Czech parents. Nothing is known of his postwar career. (11) Karl Patzelt (5 victories) was born in Bohemia. He was killed in action. (12) Franz Wognar (5 victories) was of Slovakian background. Nothing is known about his postwar career.

An important feature of the book is the color drawing by Ray Rimell (of Wind Sock). These drawings (with the number of aircraft illustrated, if more than one, in parentheses) include the Fokker B.1, Albatros B.1, Hansa-Brandenburg C.1 (2), Hansa-Brandenburg D.1 (6), Aviatik Berg D.1 (3), Albatros D.III (25), Phoenix D.1 (6), Hansa-Brandenburg CC, Hansa-Brandenburg W.18, Oeffag H, Lohner T, and Lohner B.II. The drawings are well done and excellently reproduced in vivid colors on high-quality glossy paper.

The format of devoting one chapter to each ace causes the text to become somewhat repetitious, especially when covering the 15

aces with 5 victories each. However, the description of aerial warfare in Russia, Rumania, Albania, Dalmatia, and northern Italy will open new vistas to readers who have been conditioned to believe that all the important aerial fighting was over the Western front.

This book is highly recommended to all readers interested in WWI, especially those with a strong curiosity about the origins of aviation in Eastern Europe. Don't let the apparently high cost of the book prevent you from giving careful consideration to its purchase. If you're interested in the subject, it is worth every penny. However, I feel obligated to warn who of a possible hidden cost. If after reading this book, you get an uncontrollable urge to build models of the aircraft described, you could pay more for two 1/72-scale kits (the Star-Strutter and the Berg) than you paid for the book.

The review copy was kindly provided by the publisher.

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(Continued from page 96)

armament.) Address: La Lorgnette, c/o Henri Demaret, Rue d'Opprebais 170, B-5922 Maleves-Sainte-Marie, BELGIUM.

"Photos and more information about the same subject can be found in the Belgian aviation magazine 'Aero Magazine' issues 15, 16, & 17 (July 1985 to January 1986). The text is in French. Address: Aero Magazine, c/o New Fashion Media, 60 Avenue Louise, B-1050 Bruxelles, BELGIUM."

Jacques Jost (SAFCH #720), 2 Rue Beau Site, 57540 Petite-Rosselle, FRANCE

"Here is some news of the Finnish Air Force: SAAB Drakens. The 20 'new' Drakens consist of 2 two-seat Sk-35C [DK-268 (35807) & DK-270 (35812)] and 18 single-seat J-35F [DK-233 (35417), DK-227 (35425), DK-229 (?), DK-231 (35432), DK-235 (35444), DK-237 (35446), DK-239 (35447), DK-241 (35448), DK-243 (35450), DK-245 (35451), DK-247 (35452), DK-249 (35455), DK-251 (35458), DK-253 (35462), DK-255 (35483), DK-257 (35487), & DK-259 (35499)].

"The grand total of Finnish Drakens is now 47 (six J-35B, five Sk-35C, 24 J-35F, and twelve J-35XS. However, the J-35B's will be wfu when all the J-35F's are received.

"Draken 35431 was to have become DK-229, but it crashed in Sweden before delivery in October 1984. I don't know its replacement.

"Surprisingly, J-35B DK-206 flies again! It was seen during the Lapland Wing open day in August 1985. But, this is not the original DK-206 (35266) which after it was damaged it was transferred to the technical school and was given code DK-942 (probably during the Autumn of 1983). This 'new' DK-206 has serial 35245 and could be the one that was used as an instructional airframe at Rovaniemi. Do any readers have specific information on this aircraft?

"MiG-21 All MiG-21F's are now wfu. The last flight was by MG-92 (the last MiG-21F delivered) on 17 January 1986. MG-61 has been a gate guardian at Rissala since April 1983. So far, two MiG-21BIS have crashed: MG-115 on 24 August 1984 and MG-139 on 11 June 1982.

"Fouga Magister Since all BAe Hawks have been delivered, the Magisters are slowly being wfu. Only about 15 remain, and these should be wfu by June 1986. FM-41 crashed on 23 January 1985.

"BAe Hawk The last Hawk was delivered to the FAF in November 1985. The FAF wants 15-30 more Hawks, but this depends on the economic situation and is not likely to happen in the near future. So far, two of the 50 Hawks have been lost: HW-302 on 17 March 1981 and HW-313 on 9 May 1986.

"C-47 The last official flight of a C-47 by the FAF was made by DO-8 on 18 December 1986. The fate of the other Finnish C-47 is as follows: DO-4 was wfu in April 1984 when it was sent to a museum in Finland. DO-5 was wfu in the summer of 1967 and its fuselage is still used for training of parachute troops at Utti. DO-6 was sold to Northern Airways, USA and it left Finland in May 1985 as N57NA. DO-7 was sold to Holland in 1983 and became PH-DDA. DO-8 was sold to Airveteran Oy, Finland. DO-9 was sold to Warbirds of Norway and it left Finland in May 1985 as N59NA. DO-10 crashed on 3 October 1978 at Rissala with 15 deaths - the worst peace-time crash in Finnish AF history. DO-11 was sold to Airveteran Oy, Finland. DO-12 was sold to Sweden in 1983, but it only left Finland in May 1985 when it went to Northern Airways, USA, as N58NA.

"Border Guard Helicopters The Agusta-Bell AB-412 and Aerospatiale Super Puma have been selected as the new types for the Border Guard; three of each will be ordered for SAR duties. These will replace the Jet Rangers and Mi-8's in this duty. One AB-412 has already been delivered with the other to follow during 1986-88.

"SAAB Draken: DK-206, ex-FV 35266 (RSwAF), which was delivered in 1972, suffered an engine fire in 1974 (?), and has been used as an instructional airframe since, is now coded DK-942. However, ex-FV 35245, which was used as an instructional airframe in Rovaniemi (and possibly coded DK-200, although I doubt it now), has been restored to flying conditions and uses the code DK-206. Both of these machines are J-35B types.

"On June 1984, the FAF purchased two more Sk-35C two-seat Drakens from Sweden. These are serialised DK-268 and DK-270 (ex-FV 35807 and 35812 respectively).

"The 18 ex-FV J-35F Drakens are to be serialised in the range DK-225 to DK-259 (odd numbers only). The highest number so far seen is DK-239. Deliveries will be completed during



1986. According to a list published in KONTAKT 68, Sept. 84, these 18 planes are (in order of delivery) as follows: 35462, -87, -17, -47, -50, -43, -58, -31, -55, -51, -46, -52, -99, -25, -52(sic), -44, -48, and -83. However, before delivery, one of these crashed in Sweden in Oct. 84, and it has been replaced with another J-35F. I don't know the tie-ups yet.

"MIG-21: MiG-21bis, serial MG-115, was w/o 24.08.84 because of engine trouble. The pilot, Capt. Salla, ejected. This was the second crash since the first MiG21bis were delivered in Sept. 1978.

"Some of the older MiG-21Fs are reported as wfu and waiting for scrapping.

"Both MiG-21Us, serials MK-103 and MK-104, which were wfu in 1980, are now used as instructional airframes.

"C-47/C-53: The Dakotas were retired officially on 18 Dec. 84, although some test flights were reportedly flown after this. DO-6 and DO-8 have been reportedly sold to Norway.

"PIPER CHEROKEE ARROW II: PA-3, ex OH-PDU, dd 05.74, damaged 22.03.78, repaired and back in service Sept. 78. PA-6, ex OH-PDG, leased during PA-3's repairs from 22.05.78 to 02.10.78, then back to OH-PDG. Finnish AF uses a total of nine Piper Cherokee Arrows of which PA-1 to PA-5 are Arrow IIs and PA-11 to PA-14 are Arrow IVs.

"BELL 412: The Finnish Coast Guard (Merivartiolaitos), which is part of the Border Guard (Rajavartiolaitos), has chosen the Bell 412 as the 'smaller' of its new SAR choppers. One has already been ordered from Agusta for 1985 delivery, and two more are expected to follow. The 'bigger' type is still to be chosen, but the Super Puma is the favourite so far; three will be ordered for 1986-87 delivery.

"The Rajavartiolaitos is directly under the Ministry of Interior and its aircraft are civil-registered. For more information see SAFO #32."

"Sources of this information are Finnish and Swedish newspapers, Kontakt Magazine (highly recommended for anyone interested in Swedish aviation), and fellow SAFCH member Ben Marselis."

Martti Kuivalainen (SAFCH #282), Ruokaskatu 16 B15, SF-96200 Rovaniemi, FINLAND

"I would like to amplify on the information contained in SAFO #38 and #39 concerning the US involvement in the Dutch West Indies before the attack on Pearl Harbor. Dan Hagedorn is undoubtedly correct in stating that USAAF A-20's did not reach Surinam until early '42. However, I intended to say that US Forces (1000 man infantry) arrived in Surinam on 24 November 1941. 'Occupy' was probably too strong a term, but the fact remains that the Dutch government was not terribly happy with the situation, and was more or less pressured into accepting the fact. The Dutch had been worried about Surinam's security for some time; German U-boats were operating off the coast, and neighboring French Guyana was controlled by Vichy. However, very little could be spared from the minimal Dutch military resources to reinforce the some 250 regular Army and 500 local militia, who lacked AA guns and had only minimal automatic weapons.

"It is interesting to note that the Dutch governor of Surinam, in May 1941, suggested to the Dutch government in London that he could hire a number of American pilots with their

aircraft to provide some air defense! This idea was not pursued, but in June '41, the Dutch Colonial Minister, in Washington while returning from a visit to the West Indies, asked Admiral Stark, USN, if the US could supply AA guns to Surinam and also have US warships patrol the coast. Stark had a better idea - Why not station US forces in Surinam? The Dutch declined, fearing that they would lose sovereignty over their territory. It was well known that Roosevelt was not much in favor of 'colonies' in the Western Hemisphere, and at the same time was doing everything possible to please the Latin American countries, using the Guyanas as 'bait' for Brazil and Curacao/Aruba for Venezuela.

"Despite the Dutch refusal, Roosevelt took up the idea and wrote to Queen Wilhemina on 1 September 1941, suggesting that the Dutch accept a US force of 3000 men with AA guns. It was clear to the Dutch government that they were left little choice in the matter, and they decided to agree, but with conditions - the US had to guarantee Dutch sovereignty and, in accordance with Dutch law, all forces in the territory would fall under the supreme command of the Dutch governor, plus the Netherlands would pay the estimated cost of \$1 million per year for the garrison. Roosevelt accepted these conditions, but a few weeks later the US revealed that it had something up its sleeve. The Dutch were now asked to accept Brazilian troops as part of the force. This they categorically refused. Finally, as stated above, the US troops arrived, while the Dutch also reinforced their own contingent of ground troops.

"The Netherlands government, in response to US pressure, became rather panicky in devising plans to reinforce Surinam, obviously in an effort to head off US military assistance. Besides a plan to send five Brewster Buffaloes, it was also considered to send the Dutch 320 Sqn. (then operating Lockheed Hudsons in RAF Coastal Command in the UK) to Surinam with at least nine aircraft, preferably amphibians. All this came to naught when US troops arrived in Surinam."

Jerry Casius (SAFCH #649), 91 N. Main St., Cedarville, NJ 08311

"SKY SOLDIER: DAN JORDAN. Roaring out of the past with action, guts, and glory! Join Sky Soldier Dan Jordan as he flies the high trails to adventure."

"He glanced back. The enemy was still there! Unbelievably, Dan tightened the turn still more! Still there on his tail! And more! Now even the biplane was beginning to shudder, and Dan's vision grayed as the blood drained from his head. But still the relentless black nemesis held on, as though being towed by Dan's tail. He increased his pressure on the stick by the slightest amount possible, but as he had feared, it was too much. The biplane hurtled sideways as the air separated from the wings, snapping 'under the bottom' and down. Dan tensed as he waited for the momentary pain of slugs tearing into his spine. How had the slim-winged monoplane managed to hold on when even his biplane could no longer stand the abuse of the too-tight turn?"

"SKY SOLDIER: DAN JORDAN is available for \$16.00 US; \$20.00 overseas (surface mail). Send check or money order to AIR WARS (DJ) (be sure to add the DJ!), 8931 Kittyhawk Avenue, Los Angeles, CA 90045, USA."

"I hope you can find a way to mention the publication described in the accompanying flyer. (Editor's note: Excerpted above.) Although I have no monetary interest in it, I think it would be great to see the first 'new/old' pulp to come down the pike in many a moon get a chance to find its place in the market.

"If nothing else, the background for these stories is fascinating: Martin Willoughby, the author, wrote them more than fifty years ago; it was intended that they appear in a magazine which would be in head-to-head competition with Street & Smith's Bill Barnes: Air Adventurer. The magazine was still born so Willoughby boxed up the stories and stored them away in his basement. He died recently and his son offered them, lock, stock, and barrel, to the publisher of Air Wars asking only that there be a possibility that they would be published. That's where things stand now - the publisher of Air Wars is trying to give 'Dan Turner' his shot - at long last."

Burt Leake (SAFCH #665), 4291 Larchwood Pl,  
Riverside, CA 92506

#### EMBRAER NEWS (August 1986)

The Venezuelan Air Force received on July 14 the first four EMB-312 Tucano trainers from a total order of 30, valued at US\$50 million, it has placed with Embraer. The aircraft were formally accepted during ceremonies presided over by Dr. Jaime Lusinchi, Present of Venezuela, at General Francisco de Miranda Air Base, in Caracas, before an audience of over 1,000, which included Air Force, Navy and National Guard personnel, invited guests and dignitaries. Speaking on the occasion, the Air Force Commander-in-Chief, General Ramon Enrique Mendoza Ibarra, said "The selection of the Tucano aircraft was the result of lengthy

analysis, study and consultations, so that Venezuelan pilots would have the best training aircraft available". For his turn, Defense Minister General Jose Rafael Cardoso Grimaldi, referred to the occasion "as a significant date in Venezuelan Air Force history, because the new training planes will give the Air Force a chance to reach the highest level of professionalism". Venezuelan Air Force's Tucano trainers will be used for cadet tuition at the Military Aviation School. The Service is the sixth customer for the Embraer military tuboprop trainer.

Four additional EMB-312 Tucano trainers have also been delivered to the Honduran Air Force as a result of a follow-on order it has recently placed with Embraer. The Honduran Air Force already operates eight Tucanos that were delivered two years ago and are utilized for cadet training at the Military Aviation Academy at Comayagua, near Tegucigalpa. Although not made public at the time, Honduras was the first international customer for the Tucano, followed closely by Egypt, and its air force was the first foreign air service to graduate pilots on the type, as well as the first to put a follow-on order for the aircraft.

In spite of being in the marketplace for only a little over three years, the EMB-312 Tucano has already attained an enviable position with 556 units marketed to date, it has outsold the competition by an ample margin. A total of 217 examples have been delivered so far and the type is in service with, or been ordered by, the air forces of Brazil, Egypt, Iraq, United Kingdom, Honduras, Venezuela, and an undisclosed country.

## AIRCRAFT OF THE SMALL AIR FORCES

### A CONTINUING RESEARCH PROJECT

A very ambitious and long-running SAFCH Research Project appears to be coming close to fruition. Chris Thornburg's massive "Aircraft of the Small Air Forces" has reached a point where more membership participation is necessary to carry the project further forward. Long-time SAFCH members will remember that Chris is working on a compilation of all the aircraft of all the small air forces. Ultimately, Chris goal is to make these lists available to all SAFCH members at cost (paper and postage).

Initially, these lists are compiled from second-hand sources and, as such, they are preliminary in nature. Or as Chris says, "These lists do not necessarily include all the aircraft that were used nor does an aircraft's inclusion mean that it was actually used."

With the help of his new personal computer, Chris has now completed preliminary lists for all countries that will be included in this study. Anyone with an Apple II system can get everything by sending 16 disks to Chris.

In addition, working with overseas members he has produced corrected lists for Denmark, Finland, and Norway. The list for NORWAY,

corrected with the help of Bjorn Olsen and the Norwegian Aviation Historical Society, is included here to give everybody an idea of what can be accomplished through international cooperation.

Also included is the preliminary list for Ethiopia, so that readers can judge for themselves the status of the preliminary lists.

Chris now needs help in correcting the other lists. If you have information on the types, numbers, and dates of service for the aircraft used by specific countries that adds to or corrects information published in the standard references, please contact Chris. He will send to you a copy of the appropriate preliminary lists so that they can be updated and corrected.

As corrected lists become available, they will be published in the SAFO so that the entire membership will have an opportunity to further fine-tune the lists by contributing additional corrections.

Address all questions and contributions to: Chris Thornburg (SAFCH #175), 4940 Mermaid Blvd., Wilmington, DE 19808.

## Norway (NOR)

AF	1912	Haerens Flyvevaaben (Army AF)		
	04AP41	Flyvapnenes Felleskommando[FFK] (Unified Command AF,N)		
	41-45	RAF		
		331 21JL41-21N045		
		332 16JA42-21SE45		
	10NO44	Luftforsvaret (Royal Norwegian AF)		
	01JL53	Kongelige Norske Flyvopen (Flyvopenet) (Royal Norwegian AF)		
	10DE59	Luftforsvaret		
	Cr.	(Royal Norwegian AF) [RNAF]		
=====				
N	1912	Marinens Flyvevaaben (Naval Air Service)		
	04AP41	Flyvapnenes Felleskommando[FFK] (Unified Command AF,N)		
	41-45	RAF		
		330 25AP41-21N045 to AF		
		08FE42-		
		Norwegian Detachment, Woodhaven of No.210 Squadron RAF;		
		-FE43-		
		No.1477 Norwegian Flight;		
		333 10MY43-21N045 to AF		
	-10NO44	Luftforsvaret (Royal Norwegian AF)		
=====				
A	1955	Feltartilleriets Fly-OP-tjeneste (Army Field Artillery Aircraft Observer Service)		
	Cr.	[a/c in AF inventory]		
=====				
CG	1980	Kystvakten (Coast Guard)		
	Cr.	[a/c in AF inventory]		
		[N-, LN-]		
	Airspeed Oxford I	{AF}	43/43	2
	" " I	"	46/53	10
	" " II	"	46/53	13
	Arado Ar 196	{N}	45/46	2
	" Ar 196A	"	40/40	1
	A.W. AW.35 Scimitar "Falk"	{AF}	36/40	4
	Auster II/III	"	43/45	2
	Avro 504A	"	17/23	2
	" 504K	"	17/28	5
	" 504(?)	"	22/22	1
	" Anson	"	46/51	10
	Bell 47D Sioux	"	53/68	6
	" 47G "	"	54/70	3
	"(Agt) 47J "	"	58/67	5
	" 204, UH-1B Iroquois	"	65/84	37
	" " UH-1C "	"	65/84	4
	Bleriot XI	"	14/15	1
	Breda Ba.28	{N}	35/40	5
	Bristol Beaufighter II	{RAF}	43/43	2
	"(lm?) F.2B Fighter	{AF}	21/30	5
	Caproni Ca.310 Libeccio	"	38/40	4
	Cessna 305, O-1A Bird Dog	{A}	60/84	27
	Cierva(Avro) C.30A(671 Rota I)	{AF}	35/36	1
	Consolidated Catalina GR.III	"	42/42	9
	" " GR.IVB	"	42/54	22
	" " ,PBV-5A	"	53/61	6
	Curtiss 75A-6 Hawk	"	40/40	19
	" 75A-8 "	"	40/42	36
	Dassault Falcon/Mystere 20C	"	78/84	1
	" " " 20ECM	"	72/84	2
	deH. D.H.60M Moth	"	30/40	13
	"(FF)D.H.82 Tiger Moth	"	33/40	17
	" " D.H.82A " "	"	33/40	21
	" " " " "	"	42/44	3
	" D.H.98 Mosquito II	{RAF}	43/43	8

"	"	"	T.III	{AF}	46/52	3
"	"	"	FB.VI	{AFRAF}	43/52	50
"	D.H.100 Vampire	F.3	{AF}	47/57	20	
"	"	FB.52	"	49/57	36	
"	D.H.115	"	T.55	52/55	6	
"	Can. DHC-3 Otter	"	"	54/68	10	
"	" DHC-6-100 Twin Otter	"	"	67/84	4	
"	" DHC-6-200 "	"	"	73/84	1	
Dornier	Do 24	"	"	45/46	2	
Douglas	C-47A Dakota	"	"	45/74	a21	
"	C-53	"	"		1a	
"	C-53D	"	"		2a	
"	DB-8A-5	"	"	40/43	36	
"	DT-2B	"	"	25/40	1	
"	(MF) DT-2B/C	{N}	*	27/40	4	
"	" DT-2C	"	*	33/40	2	
Etrich(Rumpler)	Taube A"Start"	"	"	12/22	1	
Fairchild	C-119G Flying Boxcar	{AF}	"	56/69	8	
"	PT-19 Cornell, M-62	"	"	40/57	14	
"	PT-19A	"	"	40/57	22	
"	PT-26,A,B	"	"	42/57	50	
Farman	HF.40	"	"	16/22	12	
"	F.46	"	"	20/29	2	
"	(MF) MF.2	{N}	*	16/24	3	
"	" MF.3	"	*	17/24	4	
"	" MF.4	"	*	18/24	5	
"	" MF.7 Longhorn	"	*	12/21	13	
"	(FF) FF.1 Longhorn	{AF}	*			
"	(FF) FF.2, MF.11 Shorthorn	"	*	15/22	22	
F.F.3	Hydro	"	*	17/22	5	
F.F.4	"	"	*	19/22	1	
F.F.5, T.1A,B,C	"	"	*	18/24	18	
F.F.6, T.2	"	"	*	20/22	1	
F.F.9 Kaje I,II,III	"	"	*	22/34	19	
Fieseler	Fi 156 Storch	"	"	45/54	16	
"	(FF) " "[rebuilt]	"	*	powWII	(8)	
Focke-Wulf	Fw 58B-2 Weihe	"	"	45/45	1	
"	" Fw 189A-2	"	"	45/46	4	
Fokker(FF)	C.VD	"	*	30/40	27	
"	" C.VE	"	*	28/40	15	
"	" "	"	"	28/40	5	
G.D.(Fkr)	F-16A Fighting Falcon	"	"	80/84	60	
"	" F-16B	"	"	80/84	12	
Gloster	Gladiator I	"	"	37/40	6	
"	" II	"	"	39/40	6	
Grumman	HU-16B Albatross	"	"	61/69	18	
Hannover(FF)	CL.V (F.F.7 Hauk)	"	*	23/30	14	
H.B. W.29	Maake I	{AF}	"	21/28	2	
"	(FF) W.33(F.F.8) Maake II	"	*	22/28	6	
"	" " " " "	{N}	*	28/35	1	
"	(MF) " (M.F.8) " "	"	*	21/35	24	
"	" " " " III	"	*	28/35	5	
Hawker	Fury	{AF}	"	32/34	1	
"	Hurricane I	"	"	41/41	9	
"	" IIB	"	"	41/41	14	
Heinkel	He 115A-2(He 115N)	{N}	"	39/42	6	
"	He 115B-1	"	"	40/41	2	
Interstate	Sl-A Cadet	{AF}	"	42/45	2	
Junkers	Ju 52/3M	{N}	"	39/40	1	
"	"	{AF}	"	45/50	10	
"	W.34	"	"	45/46	1	
"	W.34ho	{N}	"	40/40	1	
Lockheed	18 Lodestar	{AF}	"	41/50	12	
"	C-130H Hercules	"	"	69/85	6	
"	CF-104D Starfighter	"	"	73/83	3	
"	(Can.)CF-104G	"	"	73/83	19	
"	F-104G	"	"	63/82	1	
"	RF-104G	"	"	63/81	18	
"	TF-104G	"	"	63/83	5	
"	P-3B Orion	{AF>1980CG}	"	69/84	7	
"	T-33A	{AF}	"	53/68	22	
Lubeck-Travemunde	F.4L	{N}	"	20/30	2	
Mess. Bf	108 Taifun	{AF}	"	45/46	3	
M.F. 1	"	{N}	*	15/22	6	
M.F. 5	"	"	*	18/26	9	
M.F. 6	"	"	*	21/27	2	
M.F. 7	"	"	*	23/31	2	
M.F. 8,8B	"	"	*	24/40	8	
M.F. 9,9B,9C	Hoverjager	"	*	25/36	15	
M.F. 10,10B	"	"	*	29/40	4	
M.F. 11	Hover	"	*31	33/40	29	

M.F. 12	"	*	39/40	1
Miles Magister	{AF}		41/42	2
Nielsen og Winther	{N}		18/19	1
Noorduyn(CCF) Norseman V	{AF}		45/57	24
N.Am. F-86F Sabre	"		57/67	116
" F-86K "	"		55/68	60
"(Fiat) " "	"		55/68	4
"(Nrdyn) AT-16 Harvard II/SNJ-4	"		42/57	40
Northrop F-5A(G) Freedom Fighter	"		66/84	78
" RF-5A(G) "	"		66/84	16
" F-5B " "	"		66/84	14
" N-3PB "	"		41/45	24
Piper Pa-18, L-18C Super Cub	{A}		55/84	16
R.A/C.F. B.E.2e	{AF}		17/25	18
Republic F-84E Thunderjet	"		51/56	6
" RF-84F Thunderflash	"		56/70	35
" F-84G Thunderjet	"		52/60	200
SAAB 91B-2 Safir	"		56/84	30
" MFI-15 Safari	"		81/84	19
SIAI S.13	{N}		21/28	1

Short Sunderland II	{AF}	43/44	6
" " GR.III	"	43/45	30
" " GR.V	"	45/45	11
Sikorsky S-55, H-19D-4	"	58/67	4
"(Wstld) S-61, Sea King 43	"	72/84	10
" " " " 43A	"	79/84	1
Sopwith(Blackburn) Baby	{N}	17/31	18
Stinson SR-8,9,9C Reliant	{AF}	40/43	7
Supermarine Channel I	{N}	20/28	5
" Spitfire IIA	{AF}	41/42	24
" " VA	"	42/42	24
" " VB	"	42/43	80
" " IX	"	42/52	432
" " PR.XI	"	46/54	3
Svenska ASJA J6 Jaktfalken	"	32/34	1
Waco SRE	"	40/43	1
Westland Lynx 86	{CG}	81/84	6

by Bjorn Olsen and Norwegian Aviation Historical Society

# Ethiopia (ETH)

AF 1924-  
-1935 (Imperial Ethiopian Aviation)

1946-  
(Imperial Ethiopian AF) [IEAF]  
1974 Ye Ethiopia Ayer Hail  
Cr. (Ethiopian AF) [EAF]

=====

A 1968?  
(Ethiopian Army Air Corps)  
[AF a/c]

N  
(Navy)

P  
(Police)  
[ET-]

Aero L-39 Albatros	83/84	:24
Antonov An-2 Colt	81/85	
" An-12 Cub	79/84	14
" An-22 Cock	79/82	4
" An-24 Coke	79	
" An-26 Curl	78/84	6
Avro Anson 18	54/	:5
" " 19 Srs 1	{GRF}	47/61
Beech [12 Pax]?	35	1
Bell(Agt) AB204B Iroquois	68/84	12
" 205, UH-1H	{A6N6}	67/84
"(Agt) AB206B Jet Ranger	82	6
Breda Ba.25	30/36	1
Breguet Bre.19	:35	1
Cessna T-50, AT-17 Bobcat	51/65	2
" R172, T-41D Mescalero		4
" 185, U-17B	{A}	/83
" 310		76/81
" 318, A-37B Dragonfly		76/84
"(Reims) 337 Super Skymaster{P}		71/81
Consolidated PYB-5A Catalina	61/	6
deH. D.H.60 Gipsy Moth	24/35	3
" D.H.80A Puss Moth	36	1
" D.H.82 Tiger Moth	/46/47	10
" D.H.104 Dove 1	51/83	2
" " 2	55/84	3
" " 7		1
" " 8	65/82	1
" Can. DHC-3 Otter,U-1A	{A6N4}	75/84
" DHC-6-300 Twin Otter{A}		76/84
Dornier Do 28D-1 Skyservant		
" Do 28D-2	{P}	79/84
Douglas C-47A Dakota		56/84
" C-47B		73/84
" C-54 Skymaster		61/84

E.E. Canberra B.52(B.2)	68/84	4
Fairchild C-119G Flying Boxcar	71/83	7
" C-119K " "	70/84	18
Fairey Firefly FR.1	52/67	8
" " T.1	52/5459?	3
" " T.2	54/58	1
" " FR.IV [ex CAN]	54/	14
Farman [monoplane]	35	1
Fokker F.XVIII	35/36	2
"(GER) Trimotor	35	1
GER a/c	24	
Ilyushin Il-14 Crate	65/84	2
Junkers W.33	35	1
Lockheed 749A Constellation	{G}	57/57
" T-33A	59/84	12
"(Can.) " Silver Star	60/81	20
" RT-33A	74	2
Mik-Gur. MiG-17F Fresco	77/83	40
" MiG-21M Fishbed-J	77/84	b
" MiG-21MF " -J	77/84	bl60
" MiG-21U Mongol	77/83	few
" MiG-23BN Flogger F	77/84	24
" MiG-23U	82	
Mil Mi-2 Hoplite		2
" Mi-4 Hound	78/80	
" Mi-6 Hook	74/85	10
" Mi-8 Hip	65/85	20
" Mi-24 Hind D	80/85	12
M.S. (?)	30/35	1
N.Am. F-86F Sabre	60/80	14 (17?)
" T-28A Trojan	60/83	18
" T-28B	64/67	
" AT-28D	80/83	8
" T-28D	63/84	12 (13?)
Northrop F-5A Freedom Fighter	66/84	15+
" F-5B	66/84	2
" F-5E Tiger II	79/84	8 (12?)
" F-5F		
Potez 25	24/36	6
SAAB B17A	46/74	66
" 17B	46/74	
" 91A Safir	46/60	16 (30?)
"(de Schelde) 91B Safir	53/83	18
" 91C Safir	60/83	14
" 91D	64/84	20
" T-17 Supporter	80/82	1
" MFI-17	75	8?
SIAI SF.260TP	84/85	21
SNIAS Alouette II	64/80	5
"(HAL) " III Chetak	(o84)	10
"(IRMA) " SE3160	64/82	5
" " " SA316B	64/84	6
" Puma, SA330L	73/84	1
Stinson L-5 Sentinel	55/67	2
Yakovlev Yak-40 Codling	83	1

# WINGS OVER THE EQUATOR

## MILITARY AIRCRAFT OF ECUADOR: Part 1

### De Havilland Canada DHC-6 Twin Otter 300

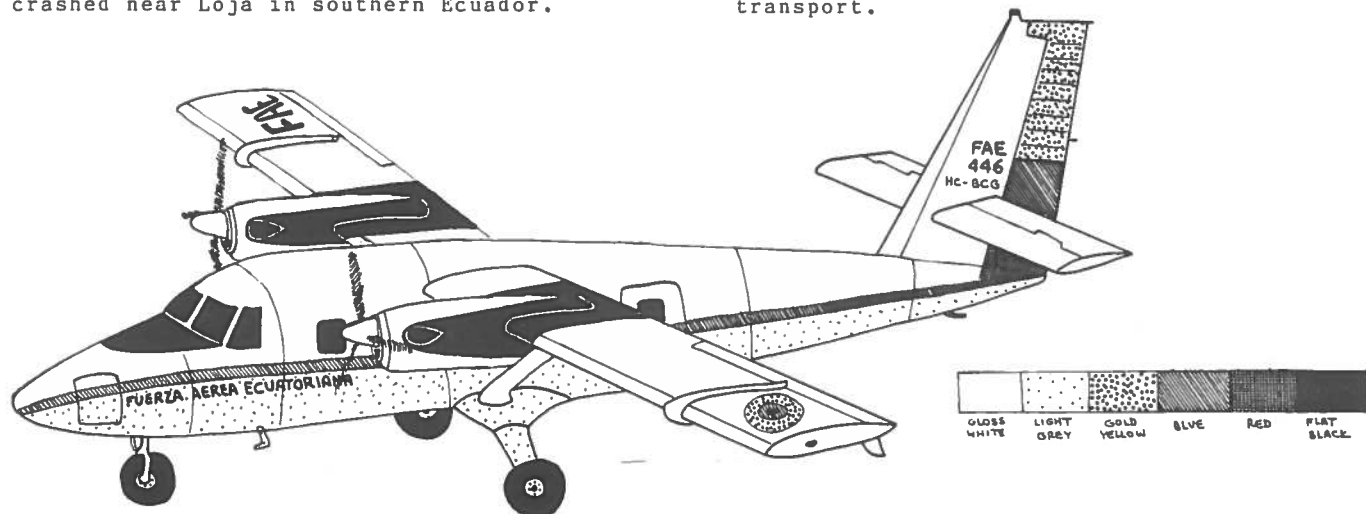
Three Twin Otters were delivered to the Fuerza Aerea Ecuatoriana on 28 April 1975. These joined Ala 11 de Transporte (11th Transport Wing) based at Mariscal Sucre at Quito. All three Twin Otters also flew with TAME (Transportes Aereos Militares Ecuatorianos) in commercial service between different points in Ecuador.

No Twin Otters remain in service, all have been written off in accidents. Two crashed on Iliniza Mountain near Quito on different dates but in the same place. The third Twin Otter crashed near Loja in southern Ecuador.

446/HC-BCG	c/n 446	written-off 13.2.83
453/HC-BAV	c/n 453	written-off 3.9.80
457/HC-BAX	c/n 457	written-off 21.5.81

It is said that the Fuerza Aerea Ecuatoriana has ordered three more Twin Otters to replace those lost.

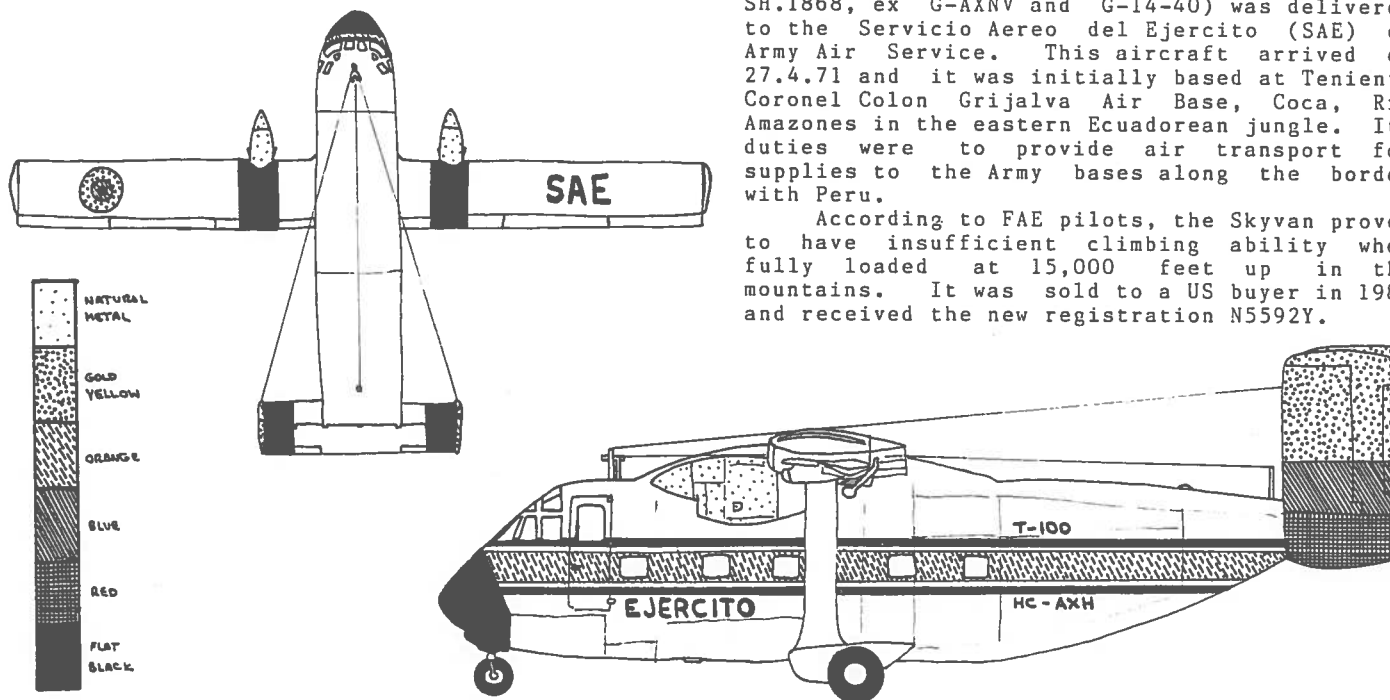
It is rumored that a fourth Twin Otter was acquired in the USA during October 1977 (ex N547N, serial 440), but this information is unconfirmed. Possibly this is one of the Twin Otters bought by Texaco Petroleum for VIP transport.



### Short Skyvan 3M-400-6

Only one Skyvan (T-100/HC-AXH, c/n SH.1868, ex G-AXNV and G-14-40) was delivered to the Servicio Aereo del Ejercito (SAE) or Army Air Service. This aircraft arrived on 27.4.71 and it was initially based at Teniente Coronel Colon Grijalva Air Base, Coca, Rio Amazonas in the eastern Ecuadorean jungle. Its duties were to provide air transport for supplies to the Army bases along the border with Peru.

According to FAE pilots, the Skyvan proved to have insufficient climbing ability when fully loaded at 15,000 feet up in the mountains. It was sold to a US buyer in 1980 and received the new registration N5592Y.



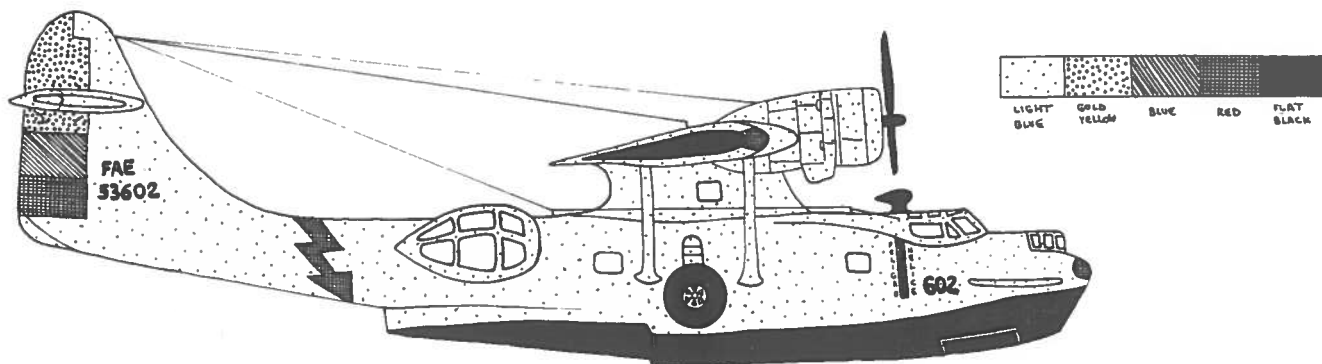
## Consolidated PBY-5A Catalina

Three amphibious Catalinas were received by the FAE under the Rio Pact Defenses Agreement in 1950. Although these aircraft formed a Escuadrilla for maritime surveillance, they were primarily used in the transportation role between continental Ecuador and the Galapagos Islands until 1968.

One of these Catalinas crashed trying to land on the Napo River in the Amazon region in eastern Ecuador. Another was written off a lack of spare parts, and it was cannibalized to keep the last Catalina in service. The third

aircraft (53602) is preserved in the Air Museum at Quito's Mariscal Sucre Air Base.

In FAE service, the Catalinas were light grey overall with the undersurface of the fuselage painted black. Floats were light grey with black undersurfaces and red noses. Roundels were carried on the upper left and lower right wings, with 'FAE' on the upper right and lower left wings. The number '602' was carried to the right of the roundel in both wing positions.

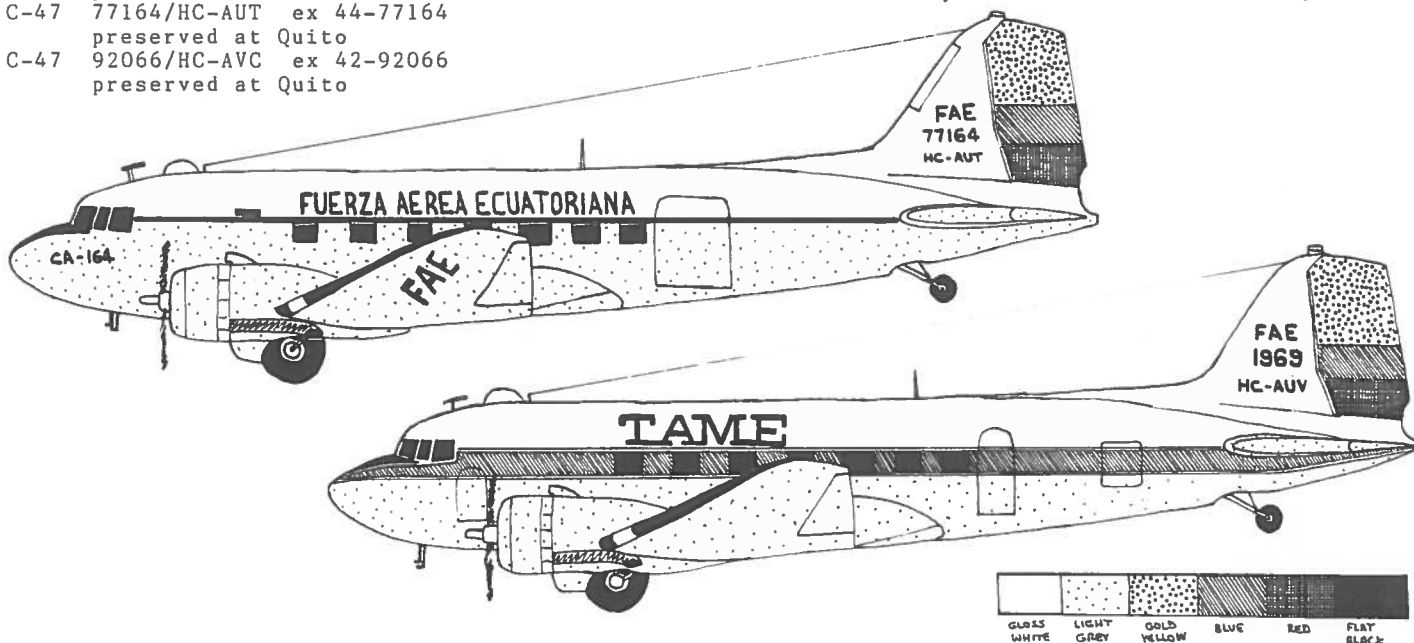


## Douglas DC-3/C-47

DC-3	1969/HC-AUV	ex N17323	
DC-3	4341/HC-AUZ	ex 41-7842, PP-ANP	
	preserved at	Guayaquil	
C-47	11747/HC-AUY	ex 42-68820, PP-AKI	
C-47	11775/HC-AVD	ex 42-68848, N9321R	
	preserved at	Guayaquil	
C-47	15677/HC-AUR	ex 43-15677	
C-47	20120/HC-AUW	ex 43-15654, N16774	
	preserved at	Guayaquil	
C-47	20179/HC-AUK	ex 43-15713, PP-YPJ	
	w/o 12.9.71		
C-47	23926/HC-AVF	ex 43-23926	w/o 1971
C-47	49785/HC-AUP	ex 43-49785	
	preserved at	Guayaquil	
C-47	49789/HC-AUS	ex 43-49789	
C-47	76448/HC-AUQ	ex 43-76448	
	preserved at	Cuenca	
C-47	77164/HC-AUT	ex 44-77164	
	preserved at	Quito	
C-47	92066/HC-AVC	ex 42-92066	
	preserved at	Quito	

After WWII, Ecuador became a member of the Rio Defense Pact and received at least fourteen C-47's and three DC-3's which formed the Grupo de Transportes (Transport Group) based at Mariscal Aucre Air Base at Quito.

In response to an initiative by Mayor Jose Maria Montesinos, a para-military transport division of the FAE was established as the Transportes Aereos Militares Ecuatorianos, or TAME, was established in December 1962. The FAE allotted two C-47's and two DC-3's from the Grupo de transportes to operate what was effectively a commercial service between the cities of Guayaquil and Quito, the aircraft being assigned dual civil and military registrations. In September 1964, TAME's fleet was increased by the addition of a DC-6B.



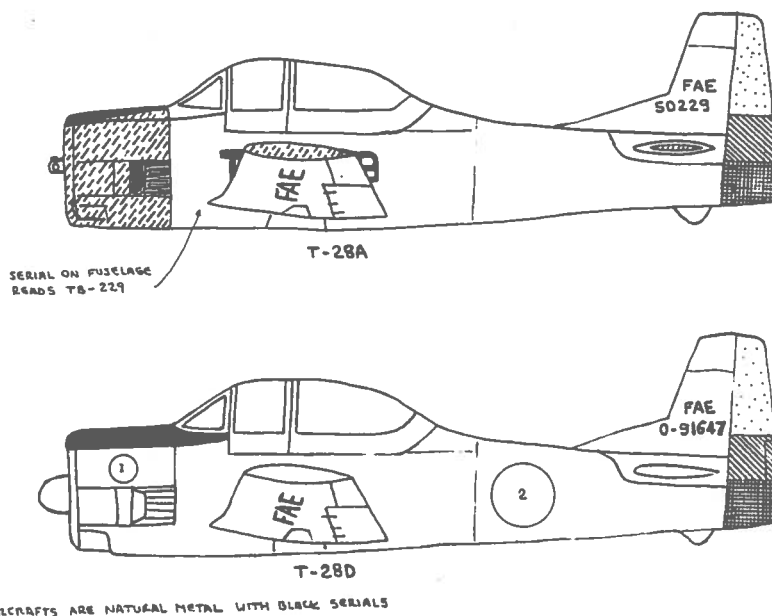
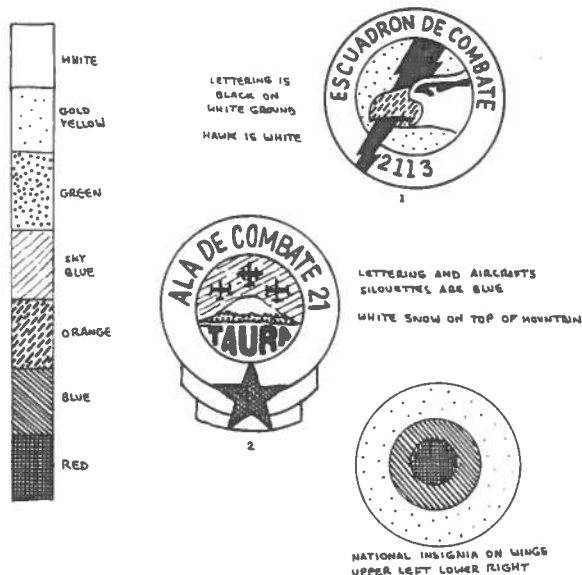
## North American T-28A/D Trojan

The FAE took delivery of twenty T-28A's in 1968 to equip the Escuadron de Bombardeo 2112 with an interim close-support aircraft. Half of these Trojans were later modified to T-28D standards and some were delivered to Escuadron de Combate 2113 during 1972. This unit continued to operate T-28's for a further four years, until it re-equipped with Cessna A-37B's.

Three Trojans have been preserved; one at the Air Museum in Quito Air Base, and two as gate guards at Guayaquil and Taura Air Bases. A fourth T-28 is presently being restored and it will be installed as a gate guard at the Salinas Flying School.

### Known aircraft include:

49-1445	ex TB-576	written off
50229/TB-229	ex 50-229	preserved at Salinas
0-91647	ex 49-1647	T-28D preserved at Quito
91686	ex 49-1686	preserved at Guayaquil
00211	ex 50-211	written off
50243	ex 50-2434	preserved at Taura
51-3572/TB-572	ex 51-3572	written off



"In SAFO #23 (April 1982) there is an article on Latin American T-28's. What is said about Ecuadorean T-28's is mostly correct; the only corrections needed refer to the colors. The Ecuadorean Trojans were overall natural metal when operational; but when the FAE restored aircraft 0-91647 (which was illustrated in the SAFO) they painted it light grey. A few corrections are also needed for the badge of Ala de Combate 21, as per my drawing. The squadron badge illustrated for 2112 Squadron is correct, and I include a drawing of the badge for 2113 Squadron which also operated Trojans. (Editor's note: See article on Ecuadorean aircraft in this issue)

"Here is some news from Ecuador: The first three T-33's were received by the FAE in July 1986; these aircraft were totally

refurbished with new avionics and they are capable of carrying more weapons than ordinary T-33's. The total order is for twenty T-33's; they will be used to enlarge the Escuadron Tiburones at Manta Air Base. Before the end of 1986, the EAF will receive the first two Kfir C-7's ordered from Israel and an unknown number of Augusta A-109K helicopters to replace the Alouette III's and a single AB-212.

"The Navy placed an order for five Bell Jet Rangers (Kiowa); these will be stationed on corvettes. The Army took delivery of the first four Aerospatiale Ecureuil helicopters which will join the Pumas and Super Pumas at Guayaquil and Latacunga Air Bases."

Alfredo Jurado (SAFCH #744), Pedro Moncayo 938 y Velez, Guayaquil, ECUADOR

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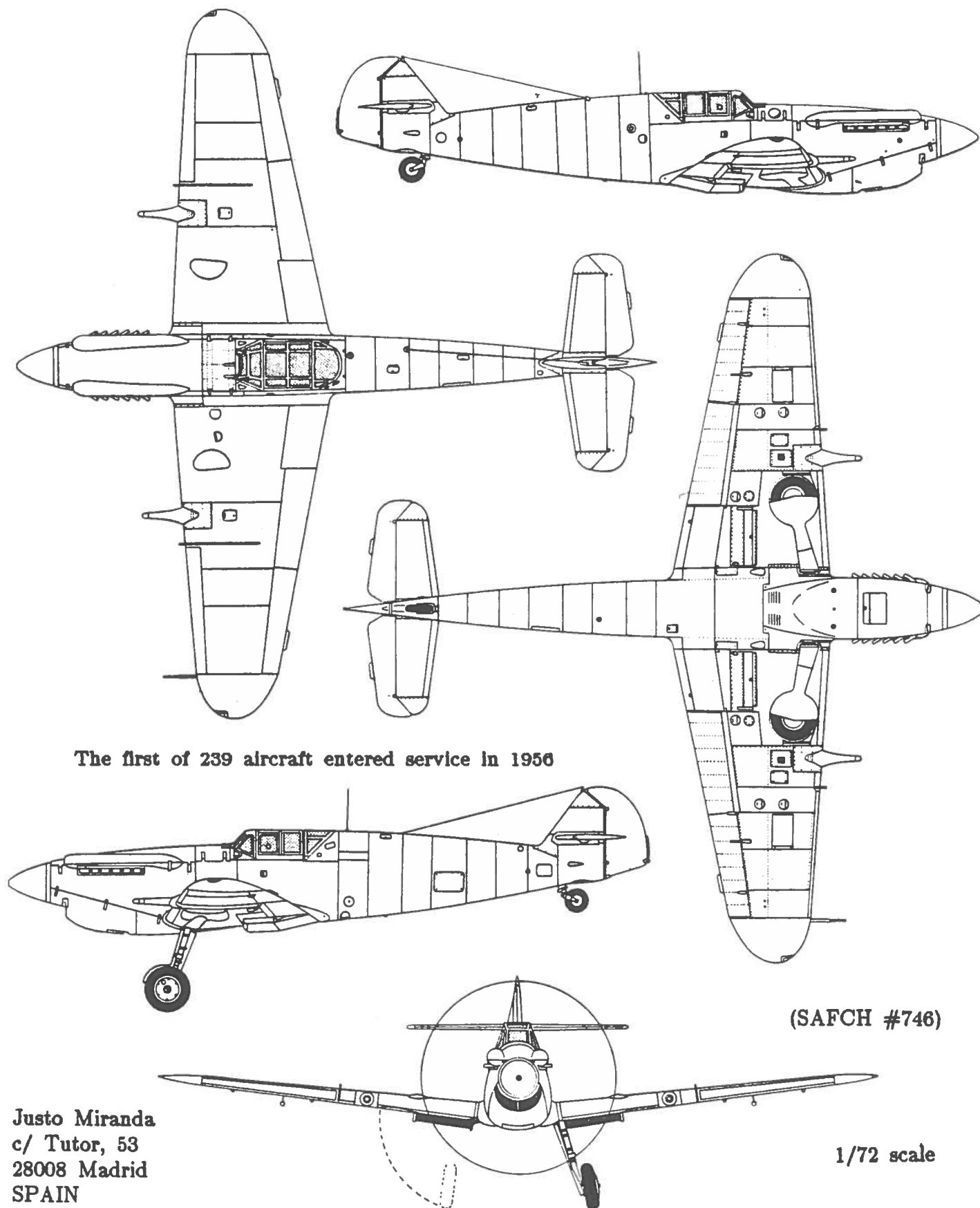
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# Spanish Air Force

## Hispano Aviacion HA-1112 M/C.4K



The first of 239 aircraft entered service in 1956

(SAFCH #746)

1/72 scale

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